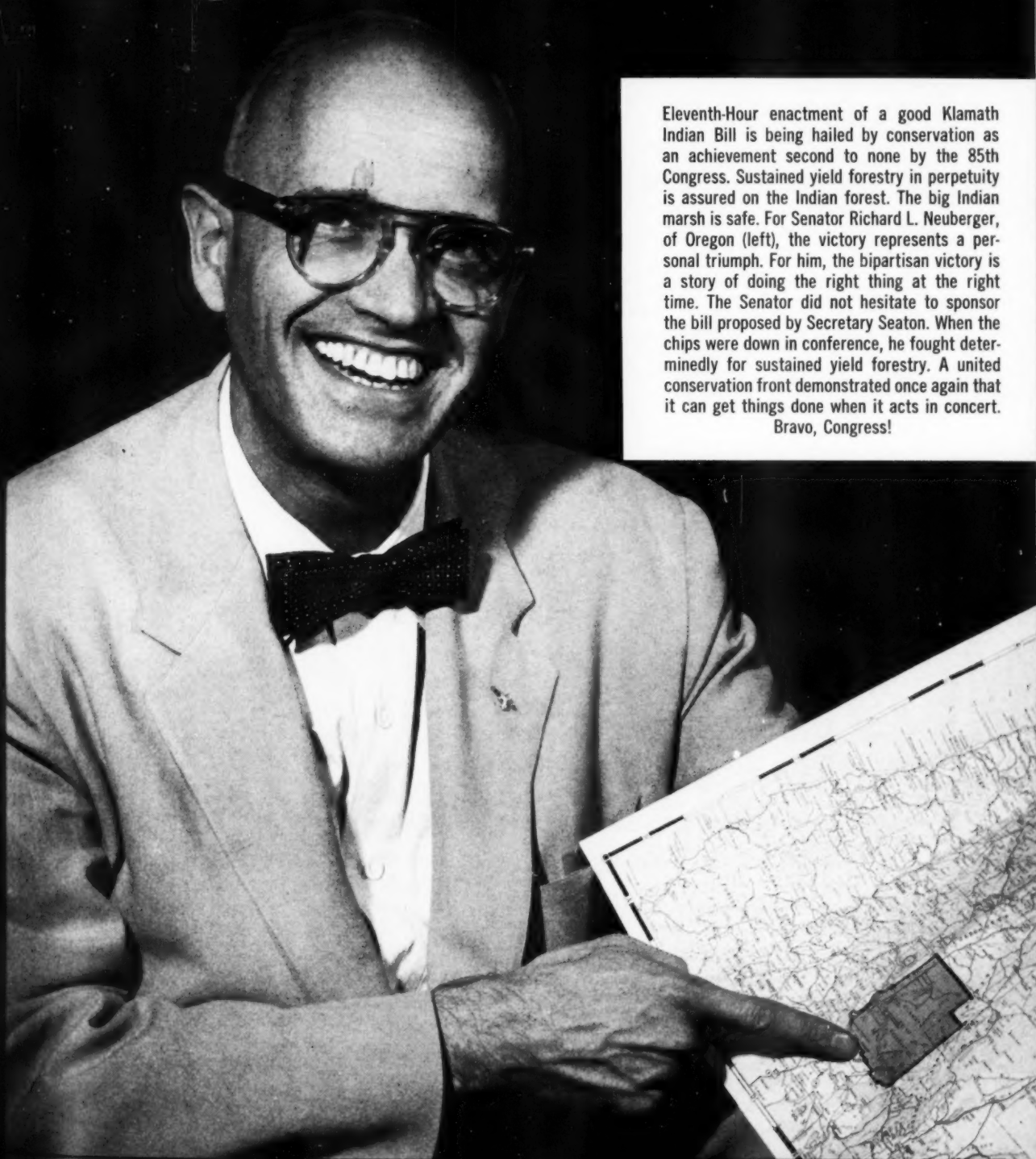


American

FORESTS

SEPTEMBER, 1959

50 CENTS



Eleventh-Hour enactment of a good Klamath Indian Bill is being hailed by conservation as an achievement second to none by the 85th Congress. Sustained yield forestry in perpetuity is assured on the Indian forest. The big Indian marsh is safe. For Senator Richard L. Neuberger, of Oregon (left), the victory represents a personal triumph. For him, the bipartisan victory is a story of doing the right thing at the right time. The Senator did not hesitate to sponsor the bill proposed by Secretary Seaton. When the chips were down in conference, he fought determinedly for sustained yield forestry. A united conservation front demonstrated once again that it can get things done when it acts in concert. Bravo, Congress!

GOOD KLAMATH BILL GOES TO PRESIDENT

There's **EXTRA** Performance in **EVERY ATTACHMENT** with **AUSTIN-WESTERN All-Wheel Drive and All-Wheel Steer**



V-Plow With All-Wheel Drive, there is plenty of power and traction for opening rounds—and especially important when thick crusts have formed on old snow.



Snow Wing Rear Steer makes it easy to maneuver around highway signs, or other obstructions; is also used to resist the side thrust of a heavy load on the wing.



Bulldozer All-Wheel Steer provides exceptional maneuverability under all conditions, and is also used to angle the blade on work like this, to shed the material sideways.



Roller Another attachment which often takes the place of a costly, single-purpose roller. It has many uses . . . on many materials, including gravel, blacktop and soil cement.



Plainsman Used for building new roads, widening old roads or raising grade elevations, this elevating grader can be attached or detached in a matter of minutes.



Scarifier Most popular of all attachments. All teeth are used for light work; while every other tooth can be removed for deep scarifying of hard material.

All-Wheel Drive for maximum mobility and 30 percent more Power-at-the-Blade—power that is made still more effective by Torque Converter drive. All-Wheel Steer for extreme maneuverability. Put them together and you

have teamwork that keeps Austin-Western Power Graders working where other graders fail. Austin-Western, Construction Equipment Division, Baldwin-Lima-Hamilton Corporation, Aurora, Illinois.

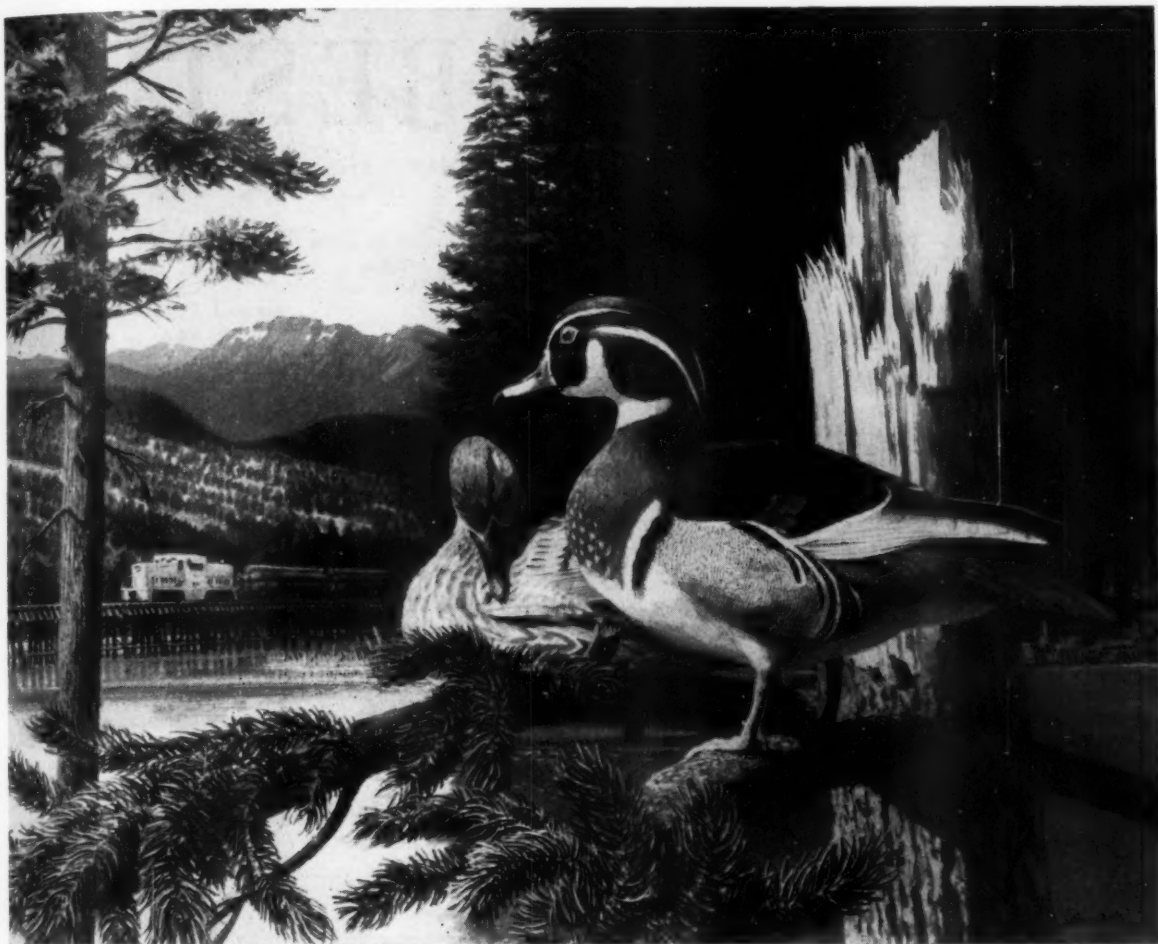
Austin-Western

CONSTRUCTION EQUIPMENT DIVISION, AURORA, ILL.

BALDWIN · LIMA · HAMILTON

Power graders • Motor sweepers • Road rollers • Hydraulic cranes





wood, water and wildlife...products of good forest management

Quality homes of wood are still America's best building buy. Many of the finest are built of beautiful west coast lumber sold under Weyerhaeuser's 4-Square trademark.



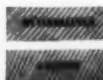
Since early pioneer days, America's forests have been her most versatile natural resource. From them, people everywhere gain an abundance of wood products, game, recreation and other benefits. These values are now being perpetuated on private lands by scientific forest management.

On Weyerhaeuser tree farms, the land is kept busy growing timber as a crop by application of modern forestry practices. The continuous cycles of harvest and reforestation on our industrial tree farms are compatible with preservation of all resources of the forest. Game birds and animals enjoy excellent forage in open, sunlit harvested areas and find shelter in the stands of trees always growing near by. The sponge-like forest soil retains rainfall and water to supply lakes, streams and reservoirs. Full protection of our forests against fire, insects and disease ensures that these benefits for man and wildlife will continue.

Today, industrial tree farms are far more productive than the wildlands of our forefathers. With proper management, they will be able to provide an endless supply of wood for present and future generations. *Write us at Box A, Tacoma, Washington for a free booklet, Promise of the Trees.*

Weyerhaeuser Timber Company

making forestlands serve America better by scientific management



AFA OFFICERS

Don P. Johnston • *President*
 Wilson Compton • *Vice-President*
 John M. Christie • *Treasurer*
 Fred E. Hornaday • *Executive Vice-President*
 Kenneth B. Pomeroy • *Chief Forester*
 James B. Craig • *Secretary*
 Ovid Butler • *Exec. Director Emeritus*

BOARD OF DIRECTORS

Charles A. Connaughton, 1958 — California
 Regional Forester, U. S. Forest Service.
 George L. Drake, 1958 — Washington, Consulting
 Forester.
 Albert Ernest, 1959 — Florida, Vice-President,
 St. Regis Paper Company.
 Stanley G. Fontanna, 1960 — Michigan, School
 of Natural Resources, University of Michi-
 gan.
 Karl T. Frederick, 1958 — New York, Chair-
 man, New York State Conservation Council.
 Mrs. Katharine Jackson Lee, 1960 — New
 Hampshire, Connecticut River Watershed
 Council, Inc.
 Henry T. McKnight, 1958 — Minnesota
 DeWitt Nelson, 1958 — California, Director of
 Natural Resources.
 Richard J. Preston, Jr., 1960 — North Carolina,
 N. C. State College of Forestry.
 Carl F. Rehnberg, 1958 — California, President,
 Foundation for American Resource Man-
 agement.
 H. B. Shepard, 1960 — Massachusetts.
 Philip W. Smith, 1960 — Pennsylvania.
 Edward P. Stamm, 1959 — Oregon, Forestry
 Consultant, Crown Zellerbach Corporation.
 James J. Storow, 1959 — New Hampshire, So-
 ciety for the Protection of New Hampshire
 Forests.
REGIONAL VICE PRESIDENTS
Southern: G. L. Paret, Louisiana. President,
 Edgewood Land & Logging Company.
Northeastern: Lloyd E. Partain, Pennsylvania.
 The Curtis Publishing Company.
Southeastern: X. L. Pellicer, Florida. Vice-
 President, The St. Augustine National
 Bank.
Western: W. S. Rosecrans, California.
Central: Peter E. Terzick, Indiana. Editor,
 The Carpenter.

HONORARY VICE PRESIDENTS

Walter J. Damtoft, North Carolina
 T. W. Earle, Georgia
 George A. Garratt, Connecticut
 Frank B. Hubachek, Illinois
 Nils B. Hult, Oregon
 Miss Harlean James, District of Columbia
 Preston B. Kavanagh, District of Columbia
 Paul D. Kneeland, Massachusetts
 Richard E. McArdle, District of Columbia
 R. Vance Miles, Jr., Alabama
 Bernard L. Orell, Minnesota
 Fairfield Osborn, New York
 Arthur N. Pack, Arizona
 Robert W. Sawyer, Oregon
 John W. Squires, Mississippi
 Mrs. Thomas M. Waller, New York
 Mrs. Marion T. Weatherford, Oregon
 George O. White, Missouri
 Louis H. Wilson, Virginia
 Conrad L. Wirth, Maryland
 Wilson W. Wyatt, Kentucky

American FORESTS

PUBLISHED BY THE AMERICAN FORESTRY ASSOCIATION

James B. Craig
Editor

Betty Kindleberger
Assistant Editor

James J. Fisher
Art Director

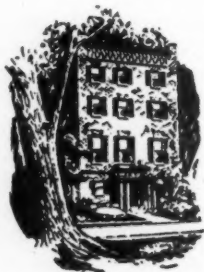
Volume 64, No. 9

September, 1958

CONTENTS

- 6 WHAT OTHER PEOPLE SAY
- 7 WILDERNESS BILL STYMIED IN SENATE • James B. Craig
- 8 EDITORIAL—How the Trick Was Turned • Representative Magnuson
- 9 WASHINGTON LOOKOUT • Albert G. Hall
- 11 EDITORIAL—Take Off the Blinders
- 12 ISLAND CHALLENGE—PART I: The Neglected Forests • Monroe Bush
- 14 ROGUE RIVER COUNTRY • Robert Dolan and Oliver H. Heintzelman
- 16 THE NAVY AND CONSERVATION • Colonel Clayton O. Totman
- 19 WIZARD WITH WOOD • Alice Spencer Cook
- 20 AMBASSADOR'S WIFE EXTRAORDINARY • Betty Kindleberger
- 22 MIKE'S BACKYARD SCHOOLROOM • Robert R. Bowers
- 23 FORESTER'S NOTEBOOK • Kenneth B. Pomeroy
- 24 SHADOWS • Jesse Stuart
- 25 THE OLD FISHIN' HOLE • Henry H. Graham
- 26 THE PRESIDENT • Robert Simmons
- 28 ALASKA—SPORTSMAN'S PARADISE • Don Carpenter
- 31 READING ABOUT RESOURCES • Monroe Bush
- 32 ARTICLES OF INCORPORATION AND BY-LAWS OF
THE AMERICAN FORESTRY ASSOCIATION

COVER • Photograph of Senator Neuberger by Vincent Finnigan



The AFA

The American Forestry Association, publishers of *American Forests*, is a national organization—independent and non-political in character—for the advancement of intelligent management and use of forests and related resources of soil, water, wildlife and outdoor recreation. Its purpose is to create an enlightened public appreciation of these resources and the part they play in the social and economic life of the nation. Created in 1875, it is the oldest national forest conservation organization in America.

AMERICAN FORESTS is published monthly by The American Forestry Association at 919 Seventeenth Street, N. W., Washington 6, D. C. Subscription price \$6 a year. Editors are not responsible for loss or injury of manuscripts and photographs while in their possession or in transit. The Editors are not responsible for views expressed in signed articles. Entered as second-class matter at the Post Office at Washington, D. C., under the Act of March 3, 1879. Accepted for mailing at special rate of postage provided in Section 1103, Act of October 3, 1917, authorized July 10, 1918. Additional entry at Baltimore, Md., December 29, 1931. Copyright, 1958, by The American Forestry Association.

PAPER BY CHAMPION

**starts
with
good
forest management**

Conservation of American forests includes making maximum use of the forests' resources. Champion's research program is continually looking for new ways to use all of the timber grown on its properties and processed in its mills. Conserving our nation's forests by complete utilization as well as sound forest management is a principle as well as a policy with Champion.



Low-grade hardwoods are utilized as pulpwood in order to return the area to full production of pine.



Pulp chips from pine sawmill slabs and edgings eliminate waste and conserve our forests.

THE CHAMPION PAPER AND FIBRE COMPANY

General Office: Hamilton, Ohio

MILLS AT

HAMILTON, OHIO

CANTON, N. C.

PASADENA, TEXAS



Forest Forum

Endorsement Urged

EDITOR:

I want to congratulate The American Forestry Association upon the important service it rendered in bringing about revision of the wilderness legislation currently before Congress. I note that the revised bill, S. 4028, contains changes or additional language to meet most, if not all, of the criticisms leveled at the original bill by AFA.

For example, the bill has been changed to make certain the proposed Wilderness Reservation Council does not have any administrative functions, nor does it stand between the Forest Service or other land management agency and the Congress in any way. In other words, the line of communication and procedures will properly be directly from the administering agency to the Congress.

I note also the bill has been amended to protect existing valid private rights in the national forest and to assure access for disease and insect control and other management techniques essential to the multiple-use principle. Furthermore, the bill now includes a strong declaration of the multiple-use principle which makes clear this isn't special interest legislation, allaying some early fears.

I hope The American Forestry Association now feels it can endorse the revised bill in order that conservationists can present a united front in support of this important legislation.

Paul A. Herbert
Chief, Research Division
Dept. of Economic Development
State of Michigan
Lansing 26

EDITOR:

I was somewhat alarmed and disappointed in reading in the July issue that the AFA is continuing its opposition to the latest Wilderness Bill. In these days of multiple membership, it may not be unusual to find yourself belonging to organizations on different sides of the fence; but it's darn disconcerting. As a member of the National Parks Association, American Nature Association, Audubon Society, and the Wilderness Society—as well as a supporter of the National Wildlife Federation and Wildlife Management Institute—I wish to agree with these organizations in seeking passage of the bill. As a member of the AFA, I feel obliged to disagree with its stand that "The American Forestry Association . . . opposes the modified bill and will do its best to block it using every possible avenue." I wouldn't be surprised if one of these avenues were the strong forestry lobby—the main AFA objection to the Humphrey Bill.

As a student of both forestry and wildlife, I have been made aware of that sense of conflict that sometimes arises over slight differences in the philosophy of land use. However, we all seem to be working on that middle ground of near harmony. It is even more surprising, then, that the AFA

still stands opposed when her sister conservation organizations have decided in favor of the merit of the Wilderness Bill. Furthermore, an objection to a Wilderness Council designed to " . . . make, sponsor, and coordinate surveys of wilderness needs and conditions. . . ." for that 2.2% of our land remaining in wilderness—much of which is not even part of the national forests—seems mighty poor reason to kill much needed legislation. Wilderness is classified as a "special" type of land cover and perhaps merits somewhat different treatment than timber production or watershed protection.

It would be interesting to know how many of the AFA's members are actually opposed to this wilderness legislation. Perhaps, if a survey were made, the Board of Directors might wish to reverse their stand. As a final statement, I would like to suggest that a forester, or anyone else, can become so zealous over the protection of personal rights that the common good may well be overlooked.

George Cromwell
Route One, Box 183
Three Oaks, Michigan

Alabama Comment

Mr. James B. Craig, Editor
American Forests
The American Forestry Association
919 - 17th Street, N.W.
Washington 6, D. C.

Mr. Ivan R. Martin
Extension Forester
Alabama Polytechnic Institute
Auburn, Alabama

DEAR FELLOWS:

You two are really pitching major league ball. The outcome of your private world series as published in the July issue of *American Forests* is still in doubt as to the ultimate winner, with one very important exception; when the shekels are laid on the mahogany, the American timberland owner will grow all of the wood that this nation will ever need and have it ready when the country needs it.

I don't know of two finer guys, each perfectly equipped, to match talents in a pitching duel and I do hope you keep up the good work to stimulate maximum interest in the continued development of our farm woodlands.

With warmest personal regards to each of you, I am

R. V. Miles, Jr.
Forestry Manager
Gulf States Paper Co.
Alabama

Doesn't Like Mr. Beck

Editor

The following is a quote from Monroe Bush's article "Reading About Conservation" in the *AMERICAN FORESTS* of July '58—"In respect to Oregon and Washington, this provides us glimpses of a fascinating

parade of colorful personalities, some perhaps good and just, others perhaps evil and foolish, but all strong men and interesting—such people as Dave Beck and Wayne Morse, Peter French and Henry J. Kaiser."

Monroe Bush should be cautioned about his opinions before putting them in print, for what respectable person wants his name mentioned in the same breath with Dave Beck? What is so strong about him and what is so interesting, making it worthwhile to have him quoted as such in your paper, or any paper?

I strongly object to giving any attention to that type of men in the *AMERICAN FORESTS*. Monroe Bush should rectify this grave mistake publicly.

John Parmentier
Bayport, L. I.

Timber Thieves Article

EDITOR:

Your July issue of *AMERICAN FORESTS* presented an article called "Timber Thieves—They're Stealing us Blind," by Kenneth B. Pomeroy, a story very close to Bureau of Land Management personnel here in Sacramento.

Congratulations to *AMERICAN FORESTS* for pointing out in this article the real need for a helpful attitude and assistance from the general public in the administration of public lands.

R. R. Best
State Supervisor
Bureau of Land Management
Sacramento, Calif.

The Spraying Debate

EDITOR:

In your January, 1958 issue we were delighted to see the editorial "Double-Barreled Challenge" in spite of the fact that your allusions to our death's-head gave us the uncomfortable suspicion that you might be making fun of us. But since the article in your May issue, "Are We Slowly Committing Suicide?", we are sure you too have been doing some thinking and research on the subject.

Too many organizations—national in scope—are protesting this poison spray menace today and too many people have joined our ranks for the bureaucratic Dept. of Agriculture to continue its list of excuses—"calculated risks," "the loss to wildlife is negligible," "wildlife will come back," "the spraying was a success," "presence of poison in the bodies of dead wildlife does not prove they died from it," etc.

The tragic results mount, and more and more well-known medical authorities are speaking out against these poisons. Sportsmen are becoming aroused and nothing can be more forceful than a selfish hunter that desires his bag full of game.

We congratulate you on your May article.

Dixie Larkin
Chairman of 1,000

AFA Praised

EDITOR:

I want to express my profound appreciation and gratitude for all the effective help which you folks at *American Forests* magazine gave to us on solving the difficult and thorny Klamath Reservation purchase question.

Without such staunch assistance and co-operation as we had from you, the successful outcome would have been impossible of attainment.

Richard L. Neuberger
United States Senator

California Study

EDITOR:

The response from all points of the compass in regard to the California Lands publication are extremely satisfying and enthusiastic. I am sending you photo-copies of a story recently published in the *Sacramento Bee*, as well as a couple of sample letters received.

In addition, the following is quoted from a personal letter received from Ben S. Allen of the Redwood Region Conservation Council:

"Many thanks for the copy of 'California Lands.' I had a fleeting glimpse of it while it was being circulated at CRA, but now I can read it, without anyone awaiting their turn—and it is so worth reading. You have every reason to be proud of its production and the authors have done a superb job.

"The survey has not failed to reveal many highly controversial problems, but instead of adopting either black or white in their composition they have used a grey color which enables the reader to arrive at his own mind or at least to know where to get the facts if he wants additional information. This is quite a confession by an old time reformer, but as I grow older I appreciate the compliment to my intelligence of the sort offered by this book."

DeWitt Nelson
Director
Dept. of Natural Resources
California

Stefferd Praised

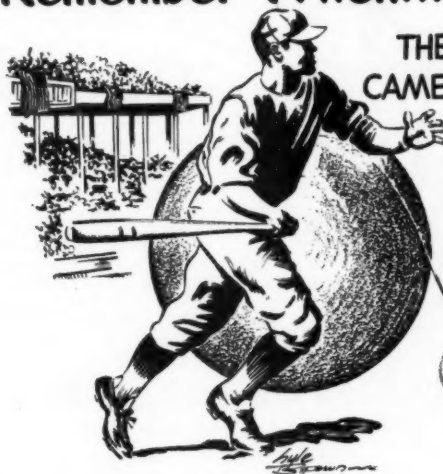
EDITOR:

As a subscriber to *AMERICAN FORESTS*, I wish to express my appreciation of Will Barker's article "World of Words" in the April issue. Enhancing this article is, of course, the cover photo with Editor Alfred Stefferud looking forth as though he were about to speak to us. Through contributing to the first (1947) of the 10 agricultural yearbooks shown with their varied titles in the photograph, I became aware of Mr. Stefferud's vital interest in every aspect of the making of this unique yearly government publication. And during my ICA assignment in Brazil (1952-1956), I had occasion to observe how much the yearbooks "Insects" and "Plant Diseases," for example, are appreciated in that country.

Mr. Barker expresses the hope that future Congresses will make proper provisions to meet the rising costs of printing the yearbook. I recall vividly how heartbreaking it was to Mr. Stefferud in 1947, because of lack of funds, to be forced to curtail or omit entire articles originally planned as part of the 1947 volume. Needless to say this disappointment extended to the contributors concerned.

Anna E. Jenkins
Collaborator, Horticultural Corps,
Agricultural Research Service
Beltsville, Maryland

Remember When...

THE "RABBIT BALL"
CAME TO THE DIAMOND!

THE GAME OF BASEBALL WAS REVOLUTIONIZED IN THE 1920'S BY A LITTLE BALL OF YARN... A CHANGE TO AUSTRALIAN YARN IN THE MANUFACTURE OF BALLS MADE POSSIBLE TIGHTER WINDING AND A HARDER, LIVELIER BALL!

MOVE
BACK THE
FENCES!

INDIAN

No. 90 INDIAN
Sliding Pump Type

"Nothing Like an INDIAN"

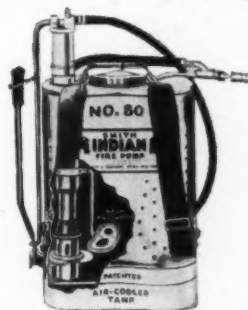
"We have 6 INDIAN FIRE PUMPS and have used them for 8 years. They are still just like new and we like them very much. We use them for everything including grass, house, barn, roof, rubbish and many other fires. There is nothing else like them."

Earl L. Koch, Asst. Chief
Ann Arbor, Mich. Fire Dept.

FIRE PUMPS

revolutionized fire fighting over 25 years ago and are recognized today as "One Man Fire Departments — Worth Their Weight in Gold."

BOTH TYPES
APPROVED BY
UNDERWRITERS'
LABORATORIES,
INC.

No. 80 INDIAN
Lever Type Pump
and Handle

Write for New Catalog

D. B. SMITH & CO.

"For 70 Years the Leaders"
405 MAIN ST., UTICA 2, N.Y.

PACIFIC COAST BRANCHES

Hercules Equipment & Rubber Co.,
Inc., San Francisco 7, Cal.

Fred E. Barnett Co., Portland, Ore.
Fred E. Barnett Co., Klamath Falls,
Ore.

Halprin Supply Co., Los Angeles
15, Cal.

Mill & Mine Supply, Inc., Seattle,
Wash.

L. M. Curtis & Sons, Salt Lake City, Utah

CANADIAN AGENTS

Fleck Bros. Limited, Vancouver,
B.C.

C. E. Hickey & Sons, Ltd.,
Hamilton

Bison Hardware Co., Toronto



State Studies on Small Woodlands Urged

EDITOR:

I have a copy of your letter to Dean Preston indicating that you would like to publish in *American Forests* the contents of a letter I wrote to Mr. W. K. Williams, extension forester for the eastern United States. This concerned my ideas of a procedure for holding individual state conferences on small woodland management.

This letter expressed *my own views* as to how such a conference should be planned and conducted in our state so as to develop the greatest possible cooperation from all interests concerned.

It in no way reflects official Extension Service thinking on either the state or national level. I wrote it to Mr. Williams with the idea in mind that if a procedure had not been worked out, the Forest Service might well want to consider my suggestions as one possibility.

In some program phases, we have enjoyed excellent cooperative relationship with the Forest Service; and, therefore, you can understand that I do not want to give the public the impression that I am criticizing

them for their aggressiveness and interest in wanting to spearhead these conferences. My only concern is to suggest how I feel one might most effectively be organized in our state.

If you don't mind including this statement along with the suggestions I have made, I would have no objections to your publishing the contents of my letter to Mr. Williams.

John Gray, In Charge
Forestry Extension
North Carolina

Mr. Gray's letter to Mr. Williams follows:

DEAR BILL:

I have your letter and news item of May 7, concerning Forest Service plans for eleven state meetings; and I have been giving it considerable thought and have been talking to some people around here about it. I thought you might like to have my own individual reaction to it.

First of all, I am delighted that the federal service is concerned about focusing a major effort on a small-woodland-owner

program. Overall objective thinking and planning to develop an adequate program to get substantial results in small-woodland-owner timber growing is long overdue, both at the national and state level. Personally, I cannot commend them too highly for this evidence that they are planning to devote some major attention to it.

At the same time I am somewhat alarmed at the way they are going about it. Of course, they do not have individual state experience; so the idea of having the regional forester and state forester call a conference with the objective of developing an accelerated program for a ten-year period or longer is perhaps a natural misconception.

Here are my thoughts on this matter: Such a conference without proper preparation and study will, in my opinion, generally result in having a lot of professional foresters get together and, if private foresters are included, argue about the validity of Timber Resource Review findings with re-

(Turn to page 56)



Douglas E. Wade, editor, *Journal of Soil and Water Conservation*

Youth's Stake in Small Woodlands

DEAR MR. POMEROY:

Recently I read a copy of your talk which you gave before the Izaak Walton League of America at Colorado Springs, May 15, 1958. (Also published under title "The Problem," *AMERICAN FORESTS*, May 1958).

Of particular interest was your query at the end of the paper—"The problem is how to improve the quality and productivity of small privately owned forests. What is your solution?"

I also read the remarks prepared for the IWLA convention by Miss Louise Jackson of Denver. And, I have noticed that the U. S. Forest Service will be holding a series of meetings on small woodlots and management throughout the country this fall.

All of this ties together and makes sense because, obviously, many agencies and organizations will be seeking answers to the query which you have raised.

It has occurred to me that it might be possible to develop a large program throughout the nation on this matter of small woodlot management and get the youth of America very thoroughly involved. I had an opportunity to discuss this briefly with Mr. Kirk Fox, former editor of *Successful Farming*, and have given it some thought for a number of years.

Already we know that the vocational agricultural teachers and the Future Farmers of America are doing some work in forestry management, particularly on farm woodlots. The same is true of 4-H. A goodly number of very fine woodlot management projects have been undertaken by boys and girls in the 4-H program. The Boy Scouts of America have likewise engaged in some forestry work through their Merit Badge program, the "conservation good-turn program," and

(Turn to page 36)

Wilderness Bill Stymied in Senate

By JAMES B. CRAIG

SENATE sponsors of the Wilderness Bill last month abandoned the effort to push the bill through the dying session of Congress. With major objections to the bill yet unanswered, sponsors are unable to obtain the required majority at this time.

In leaving the arena for the moment, the wilderness bloc is not retreating in disarray as some allies of AFA in opposing the bill would have it. While there are both plus and minus signs to be weighed on the bill's prospects, actually proponents are withdrawing in good order with their hand visibly strengthened for a renewed assault next session.

Of substantial aid to the proponents was last month's eminently favorable report on the bill by the Departments of Agriculture and Interior. After vigorously opposing the original bill, the second round found the two departments generally in favor of the broad purposes of the bill although some changes and deletions were proposed.

In catering to previous objections to the bill as voiced by the Forest Service, wilderness proponents shrewdly tilled fertile soil by inclusion of a clause in the modified bill recognizing sustained yield and multiple use as purposes of national forests. The fact that sustained yield, a comparatively recent development is not recognized in the organic act of 1897 covering the national forests, has been a source of concern to the Service in recent months. Weakening of the sustained-yield language in the first House version of the amended Klamath Indian termination bill has increased that concern.

On the minus side, proponents have failed to win over other users of the public lands and there is now evidence that western opposition to the bill is increasing rather than decreasing. While Senator Watkins' much quoted statement at the hearing that the West is sick and tired of being regarded as the "Crown Colonies of the East" may have been partly for consumption back home in a political year, the fact remains that western organizations are pressing hard for hearings on the bill in those states most concerned. They want to hold the mirror up to it.

Wilderness Bill proponents have a big hurdle to surmount here. As AFA found out in pressing for a very mild amending of the mining laws covering surface resources on mining claims, it is virtually impossible to successfully press positive public lands legislation unless a majority of other users are fully in accord with the aims and purposes of the bill proposed. And while wilderness enthusiasts still point to the success of their Echo Park dam fight as an example of what can be done, they should remember that many powerful groups—notably the Chamber of Commerce—while they did not actively support that fight at the same time did not actively oppose it. These are simply the public lands facts of life in the year 1958 and it is possibly a very good thing that this is so.

At the Senate hearing, The American Forestry Association raised six basic objections to the bill in its present form. They are; (1) that the bill as presently written constitutes an attack upon the authority vested in the Secretary of Agriculture under the act of 1897; (2) proposals for a National Wilderness Preservation System dedicate substantial portions of the public lands to a single purpose use by a special interest; (3) the legislation is unnecessary because proponents have not proven that agencies concerned are not doing a good job; (4) it is premature and unrealistic to push for special consideration for wilderness prior to the completion of the fact finding survey just created by Public Law 85-470; (5) the proviso in section 2 (d) of S. 4028 for inclusion of "such areas of tribal land on Indian reservations as the Secretary of the Interior may designate as appropriate for inclusion after consultation with the several tribes" is a violation of the basic rights of private landowners and is very likely unconstitutional; (6) The American Forestry Association is opposed, firmly and determinedly, to creation of a Wilderness Council "to gather and disseminate information" at the taxpayers' expense.

Three principle changes in the present bill were recommended by the Department of Agriculture.

These were; (1) that all provisions with respect to establishment of the Wilderness Council be deleted; (2) primitive areas now in national forests should be temporarily included in the Wilderness System but should remain there only if the Secretary, within 15 years, determines them to be predominantly of wilderness value; (3) measures needed for the control of forest insects and diseases should be permitted on national forest areas in the Wilderness System without requiring presidential authorization. (The language of S. 4028 would require presidential action to authorize insect and disease control measures.)

"In summary, S. 4028 would be desirable legislation, insofar as the national forests are concerned, if amended as recommended," the Forest Service reported. "It would give statutory recognition to wilderness areas, would specify procedures for their establishment and modification, and would clarify uses that could be permitted. Some of the discretionary authority with respect to uses would be vested in the Secretary . . . some in the President. The bill would recognize sustained yield and multiple use as purposes for which the national forests are to be administered. It would give statutory recognition to recreation and wildlife habitat resources as two of the multiple-use objectives on the national forests. It would recognize wilderness areas as being one of the purposes for which the national forests were established."

Following the hearing, President Don P. Johnston, of AFA, called for a complete report on the bill by the staff at a meeting of the board in Tucson, Arizona, in October. A number of questions are being raised within AFA on what some members call the "Forest Service switch." "How can the Service even indicate it will support what is patently a single use bill still containing potentially dangerous features even if it does contain a desirable sustained-yield clause?" some members have asked. Others called the bill's Indian clause "reckless" and said it was developments of this nature that made the thinking behind this whole mea-

(Turn to page 50)

How the Trick Was Turned

By REP. DON MAGNUSON (Wash.)

A few months ago when Congressman Lee Metcalf left the House Interior and Insular Affairs Committee, a conservationist friend of mine told me that conservation had just suffered a great loss.

"Lee Metcalf will always be there when a conservation issue comes up," was my reply.

Visible proof of my judgment came on Tuesday, July 29, at about 2:00 o'clock on a hot Washington afternoon. The House had under consideration S. 3051, the bill to amend the Klamath Indian Termination Act to provide alternative procedures for the sale of a major portion of the magnificent pine forest on the reservation so as to prevent its dismemberment as a permanent source of forest products.

When the termination act was passed in 1954, it was anticipated that about 25 per cent of the tribal members would elect to cash out their share of the extensive forest holdings of the tribe and that the remaining 75 per cent would elect to stay in a newly organized tribal corporation which would operate the bulk of the forest holdings on a sustained-yield basis.

Contrary to expectation, more than 75 per cent of the members elected to withdraw. To raise the cash to pay off these members much of the forest land would have to be sold. A flood of individual sales not only would cause a sharp drop in the value of the timber, but the resulting fractionation of the ownership and subsequent logging of each parcel would gut this fine forest.

To avoid these undesirable results, the legislation is designed to provide first, that each purchaser of timber would agree to manage the timber crop on a permanent basis, and second, that the federal government would buy up all lands not sold by a cut-off date in 1961.

With respect to the purchases of forest land by private parties, the Senate bill provided that they would have to agree in the sale document to manage the forest lands "according to sustained-yield plans." However, the House committee substituted for this language the words, "so as to furnish a continuous supply of timber."

Why the change in language? There were some who said that the revised wording accomplished the same objective with less ambiguity. Yet there were others including AFA, who believed that the new phraseology would weaken the management requirements on the purchased land and thus endanger the preservation of this forest resource.

Although no longer a member of the committee,

Metcalf had followed the developments on this measure closely, as he has on all issues affecting conservation. In addition, Metcalf had done his homework—a habit of his which has made him a formidable contender whenever he entered the legislative jousts on an issue he believed in.

During the debate that afternoon of July 29, Metcalf took time to engage in a colloquy with the manager of the bill, Wayne Aspinall of Colorado, incidentally, another staunch defender of sound conservation policies. Metcalf had two objectives in the back of his mind in doing so. The first, was to help make a record on the meaning of the language in the bill in the event that at some future time it might come before a court for interpretation. The second, was to confound those who felt that the change in wording might open the door for a quick and destructive harvesting of the timber sold.

"The reason given by the committee in the report that the words 'to furnish a continuous supply' were used," Metcalf pointed out, "is so that there will not be imposed more stringent requirements on the management of these lands than other national forest areas. I would like to inquire of the gentleman," Metcalf proceeded, turning up the other side of the proposition, "if there is intention to impose less stringent requirements than on other national forest lands."

Mr. Aspinall; "That is not the intention of this."

The trick was turned.

Metcalf's move effectively took the wind out of the sails of those who hoped the House amendment would constitute a significant relaxation of conservation requirements. The sails themselves were torn down when, in part as the result of the groundwork laid by Metcalf, the conference committee combined the two versions in the phrase, "according to sustained-yield procedures so as to furnish a continuous supply of timber."

Significant in view of the Metcalf-Aspinall exchange is the explanation by the managers on the part of the House that, "The conferees believe that this language will impose neither more nor less stringent requirements on private purchasers in the management of their Klamath forest lands than is imposed on the management of national forest lands by the Forest Service."

This, combined with the fact that these lands will be wisely managed "in perpetuity," spells out a notable and decisive victory for conservation second to none in the 85th Congress.

Washington



Lookout

By ALBERT G. HALL

WATER DEVELOPMENT LEGISLATION TOOK THE SPOTLIGHT during the closing days of the 85th Congress. The huge public works bill totaling \$1.118 billion was finally approved by both Senate and House. In presenting the conference report, Representative Cannon of Missouri, chairman of the House Appropriations Committee, said, "This bill is entirely too large. It comprises many items we could get along without. It appropriates vast sums of money that should not be appropriated." The bill provides for about \$54 million more than was requested by the President's budget for the Corps of Engineers projects. Other public works programs—Bureau of Reclamation, Bonneville Power Administration, Southwest Power Administration, and Tennessee Valley Authority were provided for at approximately the amounts requested by the budget.

TWO LARGE RIVER BASIN STUDIES WERE AUTHORIZED. Backed by the senators from Georgia, South Carolina, Alabama, and Florida, an 11-man study commission was approved to study and develop plans for the land and water resources for the Southeast. The area involved comprises about 109,246 square miles in South Carolina, Georgia, Florida and Alabama, 100 square miles in Tennessee, and 359 square miles in North Carolina. A similar study, proposed by Senator Johnson of Texas, was authorized for the major river basins of Texas. In addition to studies and recommendations for the water conservation, flood control, and power development, the commissions will make recommendations for the development and integration of programs affecting forestry, soil conservation, etc.

FIVE CONVERSION PLANTS TO PRODUCE USABLE WATER FROM SALT AND BRACKISH WATER have been authorized. These will be demonstration plants to be developed by the Department of the Interior. Initial fund authorization is \$10 million.

WATER DEVELOPMENT COMPACTS WERE GRANTED for the Great Lakes Basin, and for the Tombigbee-Tennessee waterway. The Great Lakes compact permits the states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin to study and develop integrated plans for the development and utilization of all natural resources with the basin. The Tennessee-Tombigbee compact involves Alabama and Mississippi and provides for the development of a waterway for navigation purposes.

A TENNESSEE RIVER BASIN POLLUTION CONTROL COMPACT was granted to the states of Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee and Virginia. Purpose is to permit a study of stream pollution and to develop recommendations for state and federal programs.

CONTINUING STUDY OF WAYS AND MEANS TO DEVELOP NATURAL RESOURCES will be carried on by the Senate Committee on Interior and Insular Affairs and the Committee on Public Works, as a result of a Senate resolution.

THE OUTDOOR RECREATION REVIEW COMMISSION WILL BEGIN ITS STUDIES THIS YEAR. Congressional members of the Commission have been named, other members have been selected by the President but will not be announced until security clearance has been provided. The Administration had requested \$100,000 to start the work of the Commission this year, but Congressional action provided \$50,000. Another supplemental request can be anticipated for the current fiscal year, after the 86th Congress convenes. Total cost of the Commission's study of outdoor recreation potentials has been set at \$2.5 million.

(Turn to next page)

INTEGRATION OF FISH AND WILDLIFE PROGRAMS WITH ALL FEDERAL WATER PROGRAMS has been directed. Coordination of fish and wildlife programs has been required in Corps of Engineers projects. Amendments to the Coordination Act now provide that Fish and Wildlife Service be consulted during the planning stages of all water development projects, including those administered by the Department of Agriculture under the Watershed Protection and Flood Prevention Act.

A FURTHER AMENDMENT OF THE WATERSHED PROTECTION AND FLOOD CONTROL ACT passed the House providing for federal contributions to recreational and wildlife development in connection with Department of Agriculture projects. The Senate, however, deleted the references to recreation, and the bill was finally approved to provide for wildlife development only.

THE SEATON BILL TO AMEND the Klamath Termination Act was passed by both Houses of Congress and has gone to the President. Final action of the amending of the act has resulted in delay of the starting of the sales of the Klamath Indian assets until April 1, 1959 to allow for a review appraisal to include the value of mineral and other resources. Slightly modified clauses related to sustained-yield requirements applicable to private purchasers are retained in the act. Federal acquisition of the lands not purchased by private individuals or companies has been delayed until April 1, 1961.

PAYMENTS IN LIEU OF TAXES from national forest receipts will now be available for general governmental purposes in the counties to which distribution is made. Formerly, the 25 percent of receipts was allocated to the counties in which the receipts were derived, but were earmarked for use for public schools and roads.

STUDIES OF EFFECTS OF INSECTICIDES, HERBICIDES on fish and wildlife will begin this year under a supplemental appropriation of \$125,000 to be made available to the Department of the Interior. Annual authorization under Public Law 85-582 is \$280,000, a token amount which will probably have to be increased in future years.

THE NEW STATE OF ALASKA has been granted 103 million acres of public lands to be transferred from federal ownership within a 25 year period. Surveys of lands will be initiated in this fiscal year under a supplemental appropriation of \$615,000. The original Alaska statehood measures had proposed state selection of 183 million acres over a 50-year period.

AMENDMENT OF THE MIGRATORY BIRD HUNTING STAMP ACT raises the price of "Duck Stamps" from \$2 to \$3, and earmarks the proceeds, except for the costs incurred by the Post Office Department in the printing and sale of duck stamps, for acquisition of areas for migratory bird refuges. Previously, the Fish and Wildlife Service had been permitted to use stamp revenues for administration and law enforcement.

Only One "Farm 40" in First 40 Polled

SINCE the so-called "Farm Forty" is the figure generally associated with the average-size small woodland, *American Forests*, out of curiosity, last month took the first 40 replies to AFA's small woodlands opinion poll and looked them over. All of them were from east of the Mississippi River.

Only one man in the 40 actually owned 40 acres and he is from Wisconsin. All except three of the 40, owned forest land and their holdings varied from one acre to 36,000 acres. The man who owned 40 acres listed his priority choice for immediate action as the expansion of present federal-state forestry assistance to provide one public forester in each forested county. On the question "should all woodland owners be required by law to follow basic practices of sound forest management" the only owner of a Farm 40 did not cast a vote. On the same question the entire 40 voted as follows: Twenty-two against; fourteen for; three didn't know; and one said, "not yet but ultimately." One of the people who voted "yes" on this question

was a lumberman. One who voted "no" was a social worker.

In general, opinions in all cases are very explicit. Many of the replies include much writing in margins. A majority of the 40 want more help of one type or another but one man in Pennsylvania who owns 99 acres said, "Whatever you do keep Uncle Sam out of it. . . Think, men, think!" Experts who had told AFA the returns might not be as high as hoped due to the fact that many people have a horror of tearing up a good magazine, were right at least in one case. This man photostated the poll pages and then filled out and returned the photostat. A number of the original 40 said they were greatly concerned regarding timber taxation that makes it difficult to make a profit. These first returns, it should be stressed, are inconclusive and possibly of no particular importance as regards to the total result. But they are mighty interesting reading all the same, especially the side comments. The returns continue to roll in.

Editorial — Take Off the Blinders

The task of improving access to national forests timber and the streamlining of timber sales procedures have made steady progress nationally under the administration of Assistant Chief Ed Cliff. As Cliff himself is the first to admit, the forests have not yet reached their full allowable cut. At the same time, timber sales on the forests last year were the greatest in history and the trend continues upward. In this work, the Forest Service has received the full support of Congress and many organizations including AFA. Even so, there are many private foresters who are far from happy with the harvesting programs on the forests and say they should be accelerated and streamlined even more. Most recent indication of this was the arrival in Washington in the closing days of Congress of six young foresters and woodsmen representing a couple hundred plywood and sawmill concerns in the Northwest, all almost solely dependent on national forests stumpage for their existence.

Vincent M. Howard, Jr., a spokesman for the group, told *American Forests*, "We all like the Forest Service. Some of us used to work for it. We also know we will sink or swim with it and believe me we want to swim. Right now we're downright worried. We depend on the forests for wood. We aren't getting that wood at the rate the Service sets up in its own sales guides. Consequently, some of the communities we serve are in a bad way. Some firms may have to close down unless something is done about the situation and soon."

The group got the ear of Senator Carl Hayden, chairman of the Appropriations Committee, Senators Magnuson and Jackson, of Washington, and others. A special hearing was set to hear the group's grievances—a feat of no small proportions in itself in the rush of a dying session. There, Howard, Bronson Lewis, Heath Hall, Don Barker, Joseph W. McCracken and Leonard N. Netzorg spelled out their troubles.

This, in brief, is what they said: "While production on some of the national forests is good, on others it is 'sloppy and inefficient.' Biggest beef centers around Forest Service sales plans as announced for the guidance of operators that don't follow through. Year after year, only a portion of the amounts listed are actually put up for sale. This throws planning out of kilter. Access is one problem but by no means the only one. The time lag between appraisal of timber, which may take two weeks, and actually putting it up for sale, which may take two years, presents one of the worst roadblocks. This contrasts unfavorably with sales procedures on O and C lands as conducted by the Bureau of Land Management. There sales are carried out promptly and on schedule. If a hurdle is encountered, the Bureau sends in men from other areas to get over the hump. This enables operators to plan their work, get roads built, and be prepared for first snowfall—all items of importance for effi-

cient operation. The Service, moreover, has shown a marked reluctance to use its right of eminent domain in obtaining ready access to disease and bug-killed timber across private lands in checkerboarded ownership patterns. When it is recalled that timber is a total loss after two years in the case of Chermes infestations, it becomes evident why speed is of importance and dilatory practices inexcusable from a forestry viewpoint. Summing up, the group asked the committee to inquire into four key problems. Those are: 1) the need for more access roads; 2) the need for examining the internal budgeting program of the Service; 3) the need for examining Service administration that in some cases fails to move with the same dispatch as BLM; 4) the importance of informing operators yearly regarding the maximum amount of timber each forest can provide measured in terms of the allowable cut, past deficiencies in meeting production quotas, salvage of disease and bug-destroyed timber, and sanitation cutting as roads program will permit."

Declaring that Congress for three years has given Agriculture and Budget everything it asked for access roads and more, Senators Warren Magnuson and "Scoop" Jackson next turned to Budget and Forest Service representatives and asked, "How about this?" If the two Senators thought the two departments would rear back and declare that appropriations still aren't anywhere near enough to do the job that has to be done, they were mistaken. Budget contributed little to the discussion. The Forest Service tried to defend its position in terms of three areas named by the visitors where the timber, according to the Service's own figures, wasn't put on the market as scheduled. Consequently, the performance was somewhat on the lame side.

In inserting the whole appropriations story in the *Record* the following weekend, Senator Jackson spelled out his own views in somewhat more detail. Pointing to the figures, he asked, "Is this Administration meeting the challenge as well as it might. . . I say that it is not. But it should—and it can." In view of the fact the public has shown in no uncertain terms that it will support timber appropriations because those appropriations actually make money for the government, the Senator said, "It is high time that the secretariat for the Department of Agriculture and the bureaucracy of the Budget Bureau take off their blinders and look to the goals that must be achieved."

Without knowing all the ins and outs of the Northwest timber sales programs, one thing would appear to be abundantly clear. Both the public and Congress have demonstrated they will support these timber programs to the hilt if they are given the facts. And as President Don P. Johnston, of AFA, commented not long ago, the public in the future will take kindly to a whole lot more performance and fewer and fewer excuses, no matter how valid those excuses may be.



Although still much room for improvement, Puerto Ricans are living better than their ancestors. Native poses at entrance of a typical bohio, made of grass and palm



Clear water flows over La Mina Fall in valley receiving 180" of rain annually

Part I—
The Neglected Forests

ISLAND CHA

PILGRIMS from impoverished governments the earth around are making the trek to Puerto Rico, where social miracles of a sort are being wrought that are the envy of economically depressed societies everywhere. "Operation Bootstrap," the aggressively publicized effort to advance the island's living level, has achieved certain remarkable successes.



Jibaro twists strands of the bark of emajagua to form rope



An extensive delta, due to upstream erosion, has formed at Patillas Lake, mouth of Rio Patillas. About 75% of topsoil has been lost from over a million acres

CHALLENGE

By MONROE BUSH

Bootstrap's imaginative, multi-pronged assault-on poverty has come close to changing the face of the island's urban life. Even sprawling, shabby San Juan has a new look. And no wonder, since 500 factories operating on the island today can be credited to this program; colorful new tourist facilities are luring those "continentals" by the tens of thousands who are searching for a place

their neighbors have not been; and not even the traditionally depressed field of agriculture is an exception, for the Puerto Rican government is making cautious but hopeful investments in experimentation in such highly centralized, highly technical projects as large-scale fruit processing and hydroponics.

As a result of this derring-do, per capita income has climbed to \$443,

almost a record for Below the Border. And the Puerto Rican is a most happy fellow. He eats better food in a better home than any Puerto Rican before him. He amuses himself through more varied pleasures in an atmosphere of larger freedom than his grandfather would have dreamed possible. Best of all, he puts a little aside each week for the almost inevitable trip to New York, which has become for the young, ambitious Puerto Rican what a fling in Chicago once was for the Indiana farm boy.

Here is the spectacle of bursting vitality amidst what was a tired people in a tired land. No wonder it is a Mecca for the communicants of the welfare gospel, for there has been achieved here, within a mere decade, an astonishing up-grading of the general welfare by means of governmental initiative. Now the people are no longer tired, yet the land remains so—and thereby hangs a tale.

Despite the solid achievements under Governor Luis Muñoz Marín, despite the irrefutable evidence of a rising living level within this one short decade, there is another, darker side to the coin. Puerto Rico is an old island of 3400 square miles, mountainous, breeze-blown, with rainfall scattered in uneven doses which change the face of agriculture within surprisingly few miles. For three hundred years, no farmer here gave much thought for the day after tomorrow. What the earth offered, was taken. If, as in the case of sugar cane, the taking did not really dam-

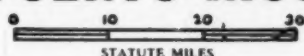
(Turn to page 34)

ATLANTIC OCEAN



CARIBBEAN SEA

PUERTO RICO




Highways ——— Railroads ———

Rogue River

OREGON'S Rogue River country is one of the most famous recreation areas of the West. The fighting steelhead and salmon of the Rogue have long been the major attractions. Angling, however, is only one aspect of the sporting activities. Outdoor recreation of nearly every type is feasible through a wealth of natural resources. Furthermore, de-

velopment has intensified the resource use and entrepreneurs have provided accommodations and entertainment to entice visitors.

The country is mountainous but well-developed transportation routes make it accessible. It is located between two of the most heavily populated areas of the Pacific Coast—in the north is the Willamette-Puget



Walls of Crater Lake once supported volcano 5000 feet above present rim

Two boats pass through Helgate Canyon on their way to fine fishing down stream



Country

By ROBERT DOLAN and OLIVER H. HEINTZELMAN

Sound region and California lies to the south. The Rogue River country is a major reason for the rapid growth of tourism in the Pacific Northwest.

The outdoor recreation possibilities and potentials of an area are closely related to the elements of nature. Recreation raw materials include favorable climate, diverse

landforms, natural vegetation, wildlife, and water. The Rogue River country possesses these natural endowments in abundance, variety, and favorable combinations.

June through August is the most popular travel and vacation period. During these months the climate of the Rogue River area is somewhat similar to the dry summer subtropic

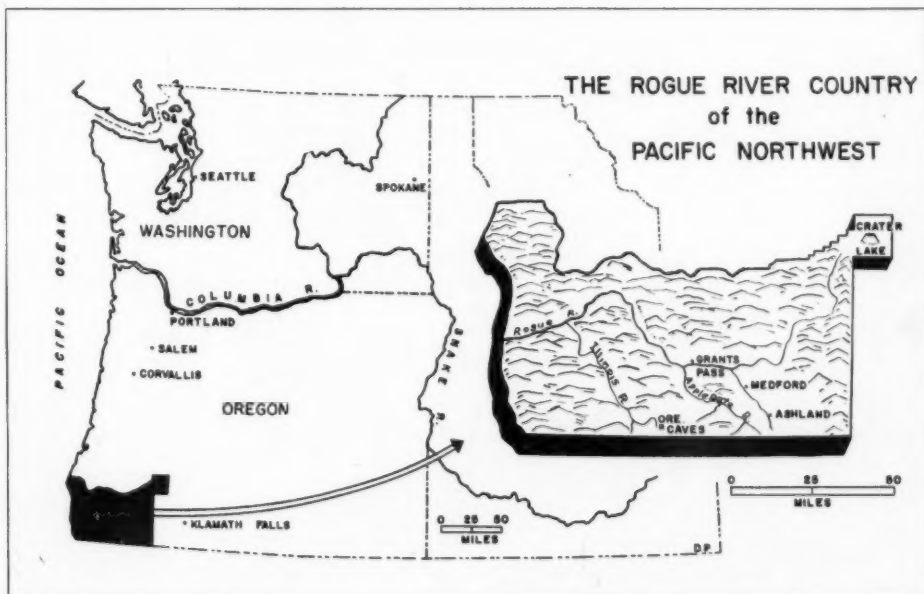
climate of southern California. Rain is rare and blue skies are typical. Average temperatures for selected stations (Grants Pass and Medford) during the three summer months are 68 degrees. Daytime thermometer readings exceeding 90 degrees are not uncommon. There is, however, an absence of high relative humidity. Nights are cool and blankets are required for comfortable sleeping.

A variety in elevations often becomes a deciding factor in the choice of a vacation spot. In the Rogue River country there are few areas of smooth relief and ruggedness is the keynote to the topography. Landforms range from flood plains, through gentle slopes of river terraces, steeper foothills, to jagged peaks which rise to heights exceeding 6000 feet. The rugged topography insures enjoyment for the visitor who derives pleasure from a passive form of recreation. The more active individual may expend energy through hiking over many miles of well-maintained forest and mountain trails. The mountains are a stimulus for the alpinist as well as present

(Turn to page 45)



Lovely city park on Rogue River at Grants Pass is a popular place for both young and old to relax on sunny afternoon



ON 14 April 1958 the Honorable Thomas Gates, Jr., Secretary of the Navy, promulgated a new policy concerning management and conservation of renewable resources for the Department of the Navy. His directive states "It is the policy of the Department of the Navy that all activities which contain suitable land or water areas shall have an active, progressive program for the management and conservation of renewable natural resources and incorporate therein modern techniques." The directive further requires the development and continuous application

of "Land Management Plans" for those installations having sufficient acreage. The plans are required to describe and show all important phases of land use and capabilities and prescribe standards for grounds maintenance for an installation, including, but not limited to, improved areas, airfields, forests or woodlands of existing or potential commercial value, and areas which can be used and managed for agriculture, grazing, or as recreational and wildlife development projects. Commanding officers are encouraged to request assistance from the De-

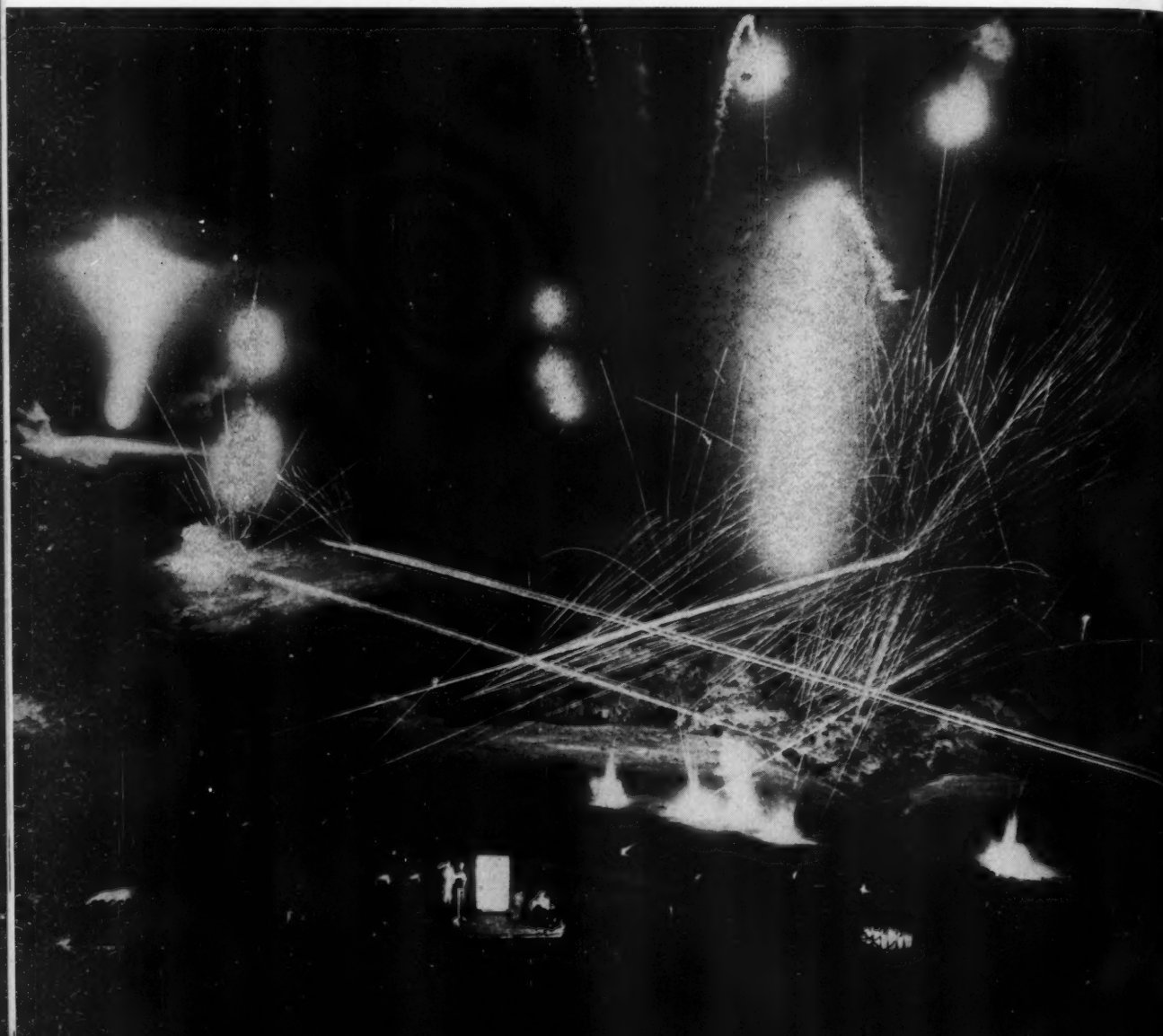
partments of Agriculture and Interior, state conservation departments, agriculture experiment stations, and county agriculture agents.

This new policy ends the single-use concept in the Navy. In the future, where practicable, the soil, water, forests, grasslands, fish and wildlife existing on our installations shall be subject to multiple-use management.

Our rapidly expanding population, which is expected to reach 275 million people in the year 2000, demands the adoption of the multiple-use concept on all public lands. No

THE NAVY AND CONSERVATION

Grand finale of a firing demonstration for Montana citizens touring Camp Pendleton is enacted at Cone Hill, Marine Corps Base



longer can we expect to have the luxury of single-use management. Each area must be so managed as to produce for our people the ultimate production of natural resource values. Our programs must ensure these values in perpetuity.

While the multiple-use concept is new, the conservation of resources is, by no means, new to the Navy. In 1799, the Congress established the first conservation program for any of our armed services when it appropriated \$200,000 "to purchase growing timber suitable for the Navy and to cause the proper measures to

be taken to have the same preserved for the future uses of the Navy." The Navy has, since those early days of "iron men and wooden ships," maintained its interest in the conservation of our nation's resources. During the coal burning era of Teddy Roosevelt's "Great White Fleet" we administered Naval Coal Reserves and with the advent of oil burning ships, the Congress established and the Navy has administered vast areas as Naval Petroleum Reserves.

Before World War II the Navy and the Marine Corps were located at industrial type installations near



About the Author

Colonel C. O. Totman, U. S. Marine Corps, is one forester who practices what he preaches. Currently assigned to duty in the office of the Secretary of the Navy, where he recommends policy concerning the conservation and management of renewable resources on Navy and Marine Corps lands, has this year planted 20,000 trees on his tree farms in Massachusetts and Maine. He graduated from the Forestry School at the University of Maine in 1935, and entered the Marine Corps that same year. He has served throughout the world and at most Corps installations in U.S.

CONSERVATION

By Colonel Clayton O. Totman



Untended for years, erosion had run rampant in the magazine area of Naval Ammunition Depot at McAlester, Okla.



After extensive soil treatment, the landscape of magazine area was completely altered. SCS provided some valuable assistance

Before timber operations were instituted at Cheatham Annex, many acres of woodland were overgrown with brush



After a forest inventory was conducted a forest management plan was prepared. Forest took on new aspect after thinning





Game warden on a reservation nails up poster for the protection of wildlife



Conservation programs must be coordinated with the purpose for which the military installation exists. There is little use for program in areas subjected to heavy firing

the major harbors on our sea coasts. The largest single area was the 4,000 acre Marine Corps Reservation at Quantico, Virginia. All of the Marines who fought in World War I received their field training on those 4,000 acres. The weapons of that era could be safely fired in that small area. However, by 1940, the capabilities of our ground weapons and our aircraft had so increased that more extensive training areas were required. It was also necessary to disperse our storage facilities into the interior. As a result of this expansion we suddenly became large land holders. The area of the Naval Ammunition Depot at Hawthorne, Nevada, for example, is over 200,000 acres, while the Marine Corps' Desert Training Center at 29 Palms, California, consists of over 550,000 acres.

The majority of the areas acquired by the Department of the Navy during this expansion were submarginal lands which had been worn out by improper farming methods and had therefore reverted to public ownership because of nonpayment of taxes. Our wartime construction of buildings, roads and railroads further upset the natural vegetation on these lands and in short order nature showed us that she could not be overlooked. Wind and water erosion of the soil became so bad that many of our structures were endangered.

Meanwhile, at those installations which contained timber resources,

the Navy and the Marine Corps hired foresters, set up and operated sawmills, and produced much of the wood products required for the operation and maintenance of the installation. Shortly after World War II the operation of military sawmills, except for engineer training, was abolished. Forest products are now marked and sold to the highest bidder under sustained-yield management plans. Some people wonder in this day of steel ships why the Navy should be interested in forestry. Actually, during World War II we used a greater tonnage of wood than we did of steel. We must have wooden mine sweepers to combat the magnetic mine. We need wood for dunnage and crating when we load our ships and above all, we use masses of paper in our modern Navy. We are indeed vitally interested in ensuring that we shall have the wood and wood products available in case of future war.

When our personnel returned from overseas upon the conclusion of World War II, they found both fish and wildlife existed on many of these newly acquired areas. Since no central policy had been promulgated concerning the management and conservation of fish and wildlife, each installation adopted the course which appeared to be most suitable. For instance, at the Naval Ammunition Depot at McAlester, Oklahoma, an agreement was signed with the U. S. Fish and Wildlife

Service which established that reservation as a game refuge. Except for the removal of predatory animals that area has been a game sanctuary since 1942. In fact all of the Naval Ammunition Depots have been game sanctuaries. At the Naval Mine Depot located at Yorktown, Virginia, the deer herd has so increased in size that some of them have had to be removed to prevent overgrazing of the available food, destruction of the reproductive capacity of the forest, and subsequent starvation of the deer. Currently at the Naval Ammunition Depots at McAlester, Oklahoma, Shumaker, Arkansas, Crane, Indiana, and Clarksville, Tennessee, state fish and game managers are live-trapping deer and moving them to other areas of the state in order to establish new populations. The deer in these protected areas are presenting a problem of increasing magnitude. We have been unable to live-trap anywhere near the numbers that must be removed annually to keep the deer population in balance with the available food supply. Attempts to drive the deer off the installation have been uniformly unsuccessful. Unless a more effective method of deer population control in these areas is developed, we will face the destruction of much of our vegetation and the depletion of the deer population by starvation and disease.

The different military uses for
(Turn to page 52)

ALTHOUGH more than a quarter of a century has passed since the tragic Lindbergh kidnapping and murder shocked the entire world, some phase of the case still appears periodically in the news. Strange to say, however, the name of Arthur Koehler has long since been forgotten despite the fact that he figured prominently in the sensational trial. With his intimate knowledge of wood and wood-working, it was mainly his testimony that convicted Bruno Richard Hauptmann of the infamous crime.

At the request of the New Jersey State Police, he identified each piece of wood in the home-made ladder used in the kidnapping, for, like finger prints, the cellular structure of the individual cells or fibers of each species remains constant. With his intimate knowledge of wood and wood-working, he then determined that the lumber used in the ladder

rails was second-growth pine, cut commercially only in the Atlantic Coast states. Taking it from there, he painstakingly traced it to a shipment sent to the National Lumber and Millwork Company in the Bronx and, finally, to the man who purchased it. Innumerable additional clues confirmed the guilt of Hauptmann beyond a reasonable doubt.

Although it was this case that brought Arthur Koehler fleeting fame, his daily work at the U. S. Forest Products Laboratory at Madison, Wisconsin, the world's outstanding institution for the scientific study of wood and its uses, he was often called to assist law enforcement officials in crimes involving wood. Once the only evidence was a few grains of sawdust found in the wrinkles of a tarpaulin used to cover a truckload of stolen tin; once it was wood used in a home-made bomb.

He entered the court room any number of times, figuratively speaking, to settle neighborhood quarrels. For instance, a certain trial involved the roots of a tree which clogged a sewer pipe. The plaintiff claimed they were from a poplar across the alley. Mr. Koehler quickly identified them as the roots of a weeping willow. The only weeping willow in the entire neighborhood grew in the plaintiff's own back yard.

Though his actual travels were confined to the four walls of his office, the magic of his lens, his calipers and his X-rays banished time and distance, often taking him to far-flung places and far-away times.

I remember the day a fragment of wood was received at the laboratory. It was from a canoe which had been washed ashore on the West Coast of Africa. Great curiosity had been aroused among the natives for it was unlike any craft that had ever touched its shores. This wood had been sent to England for identification. England had forwarded it to the laboratory at Madison.

Mr. Koehler identified it as a species of tree grown only in the South Sea Islands. "Perhaps the canoe broke away from its moorings and was set adrift," he told me. Perhaps it was overturned in a storm. He turned to the map on the wall and I watched spellbound as he traced the course the ocean currents must have carried it to beach it at this far distant place.

Swept westward by the equatorial current, it nosed among innumerable small islands and atolls in the South Seas and threaded its way between Australia and New Guinea where cross currents picked it up and carried it northwest across the equator, past Java and Sumatra and into the Bay of Bengal. Then it drifted southward, round the tip of India. Following the shore line northwest, it almost reached Arabia before it was turned southward again and out into the open sea.

Bobbing along through the Indian Ocean it re-crossed the equator, skirted the eastern shore line of Africa, passed Madagascar, crossed the Tropic of Capricorn and rounded the Cape of Good Hope. Floating in the relatively shallow waters off the cape, it was again swept northward, on and on, past the Tropic of Capricorn and the equator and finally was tossed up on the beach of Benguela, little the worse for wear, although it had traveled half way round the world.

(Turn to page 39)

WIZARD WITH WOOD

By ALICE SPENCER COOK



Ambassador's Wife Extraordinary

By BETTY KINDLEBERGER



THE extra-curricular activities of Señora Sara Cordero de Quintanilla, wife of Dr. Luis Quintanilla, Ambassador of Mexico to the Organization of American States, are probably unique in diplomatic circles in Washington, D.C. To most of us who are exposed to the affairs of the diplomatic set only through the society columns in newspapers, the striking disclosure that an ambassador's wife was interested in forestry and agriculture, and was actually taking courses in these subjects, was startling to say the least.

These unusual facts came to light when AFA was making arrangements with Ambassador Quintanilla to address the Annual Meeting banquet at Tucson. The Ambassador is considered an outstanding diplomat, having been appointed to most of the major foreign posts of his government including ambassador to Russia, and is a recognized expert in settling disputes between Latin American countries. He has been serving in his present position since 1945.

After discussing the speech he is preparing to deliver at the AFA banquet, and which has been entitled "Our American World," Dr. Quintanilla casually remarked that his wife was anticipating the Tucson meeting with as much pleasure as he, since she has become quite interested in forestry. This remark immediately aroused the attention of *American Forests*, who knew their readers would enjoy reading about such an interesting personality before meeting her at the Annual Meeting.

Señora Quintanilla graciously obliged us with an interview, and was obviously quite pleased to have the opportunity to discuss Mexican forestry. We were received by this charming, vivacious young lady in the luxurious drawing room of the embassy, filled with art objects from many parts of the world. And, it was immediately apparent that she is probably as adept at entertaining heads of state as she is in discussing the problems of forestry in Mexico.

"Mexico has a lot to learn about forestry," she told us, "and the Ministry of Agriculture must do something big if the forestry conditions are to be improved." She is most concerned about the central and northern parts of the country, the southern portion being tropical rain forests. These regions she described as being mountainous and in desperate need of a reforestation program. This situation is further com-

plicated by acute water shortages in many areas.

The Señora said that "the forestry department is not well organized and more trained technicians are needed." Because of these facts and the difficult terrain, when forest fires get started they usually burn until the rain puts them out, she added.

Being so vitally interested in the subject, the Señora has definite ideas which would improve conditions, and these include her own participation. She told us that she has enrolled in an elementary forestry course at the University of Maryland where she hopes to learn something about re-

forestation and which species will be best suited to Mexico. The Señora would also like to have a technical assistance program for forestry set up, and groups organized along the lines of The American Forestry Association. "In Mexico we have no private organizations such as AFA to help improve forestry and agricultural conditions, only the government. We must develop more of a spirit of cooperation," she declared.

When we inquired how she had become so interested in the subject, the Señora replied that her family has owned ranches for generations
(Turn to page 48)

AFA members attending the Annual Meeting in Tucson will be privileged to hear an address by Dr. Luis Quintanilla, Ambassador of Mexico to the Organization of American States. This distinguished Ambassador, a recognized expert on settling Latin American disputes, is also an author and lecturer at several of our universities.



Author explains to Mike that the roots feed the plant and hold it in ground

Mike seems pleased that Mother Bowers is "fascinated" by his praying mantis



Mike's Backyard Schoolroom

By ROBERT R. BOWERS

The praying mantis egg encasement is no mystery to four-year-old Mike Bowers



SHORTLY after moving into St. Albans, West Virginia, I planted 150 white pine seedlings on the lower end of our large lot. My idea was to keep the trees pruned and shaped for about five years, and then to sell them for Christmas decorations. But there was a problem; everytime my three-year-old son, Mike, got near the infant pines, he broke the needles off. Repeated scoldings and hand slappings did little good. My plans for the future sale of Christmas trees seemed destined for the scrap pile.

Then something happened which gave me new hope. I noticed that Mike was fascinated by the new growth which emerged from each small tree. As I watched, he caressed each tender new shoot lovingly. Maybe, I thought, the solution to my problem lay in the boy's natural curiosity about growing things and in his instinctive urge to possess them.

So, as I walked over to where Mike was admiring the seedlings, I laid my hand upon his shoulder and said, "Mike, how would you like to have these little pines for your very

own?" He looked up at me and his face brightened, as it always did when he was excited about "getting an ice cream cone," or "visiting the zoo." "Mike, these pines are yours now," I told him. "I'm giving them to you for your very own. But to keep them you must protect them and see to it that they don't get hurt."

From that day to this Mike has not broken a single needle, nor have any of his small friends. He protects those little trees at all costs, which once resulted in a bloody nose from a slightly indignant pal, but the pines are doing fine.

Since that day two years ago, Mike's increasing love, interest and curiosity about living things have never ceased to amaze me. In our back yard, where both plant and animal life are versatile, these inherent emotions are allowed to run rampant. It is there that all the "wonders of nature" are exposed.

To Mike, the back yard is where "Charley Cottontail" makes his home, and the rose hedge from
(Turn to page 42)

AMERICAN FORESTS

FORESTER'S NOTEBOOK

THE fundamentals of public service at the grass roots, taxation and local economics received a liberal airing at an open hearing called by AFA's Minnesota Land Ownership Committee on July 24-25, 1958 in Grand Rapids, Minnesota. About 60 county officials, private landowners, conservationists and forest industry representatives assembled at the invitation of the Chairman, Dr. George A. Selke. Project Leader Samuel T. Dana set the stage with a concise summation of study objectives and from then on the participants needed no prompting.

"When a man serves on a county board he owes it to himself and to his neighbors to help run the county just as he would his own business. The interests of all residents must be protected. Sometimes sacrificing a dollar of income will bring in \$50 in labor. The overall economy of the county comes first."

The speaker is no professional soldier of fortune (forester), here today and elsewhere tomorrow. No, Sir! This man is a native son, a businessman and private landowner with more than two decades of experience in the school of hard knocks as land commissioner of his county. His problems are common to the 14 forested counties in northern Minnesota. In this 18-million-acre region, only 37 per cent of the total land area is on the tax roll. Tax delinquency of cutover forest land bankrupt these counties before the depression started. Some of this tax-forfeited land has been redeemed, cutover and abandoned a second and a third time with accompanying loss of revenue to the counties. Consequently resident officials take a dim view of any proposal that might hinder stabilization of the forest economy.

With the assurance of experience gained the hard way, the treasurer of another county said:

"... We are opposed to any legislation which would force disposal of county lands into private hands. . . We are willing to exchange lands wherever it will get rid of isolated

By **KENNETH B. POMEROY**

forties and consolidate ownerships. . . . We are opposed to any legislation that lessens or takes away local control. . . . We are opposed to 'high-grading' by the purchasers of tax-forfeited lands. If the productive areas are sold and the poor ones kept, land departments soon would be unable to operate. . . The prob-

NPA NAMES SMITH



Anthony Wayne Smith

The appointment of Anthony Wayne Smith as executive secretary of the National Parks Association was announced here recently by Sigurd Olson, president of the association.

Mr. Smith, a nationally prominent conservationist, has been a member of the Board of Trustees and the Executive Committee of the association for many years. He is also a member of the Executive Committee of the Citizens Committee on Natural Resources and of the C & O Canal Association.

He was a leader in preventing the destruction of the old C & O Canal by a proposed road several years ago and in furthering the establishment of a C & O Canal National Historical Park.

He has also been a leader in protecting Dinosaur National Monument against the construction of the Echo Park dam some years back, and in similar conservation fights in many parts of the United States.

He was secretary to Gifford Pinchot while the latter was Governor of Pennsylvania. He is an attorney admitted to practice in the District of Columbia and the state of New York.

lem of handling tax-forfeited land is greater than the growing of timber. We must consider the total effect on the local economy and try to keep everything in balance and the money in the county. . ."

The basic question in the minds of both county and industrial officials is "How much tax can the land afford to pay?"

The forested counties have not labored alone. The Iron Range Resources and Rehabilitation Commission, created by the state legislature about a decade ago, lends assistance wherever it can. The basic objective is to help the counties establish sound management practices on their 3 million-acre ownership. Each county is encouraged to establish a lands department. Sometimes the salary of a forester is provided. Management plans are prepared and timber sales appraised. This work is financed cooperatively with state funds derived from a 5 per cent share in the tax on crude ore, plus county appropriations. One county has built up its lands department to an 8-man staff on a self-sustaining basis on income from its forest properties. This county estimates its net income at 22 cents per acre from its forest land as against a 6½ cents per acre tax rate on private forests. Obviously county officials consider it poor business to dispose of income-producing property that subsequently may bounce back as a tax forfeiture.

Putting the county lands on a paying basis has been a real struggle, one that still faces some major hurdles. During the depths of the depression officials of the 14 northern Minnesota counties organized the Forest Region Rehabilitation Committee. Marching into the state legislature in St. Paul in 1936 and again in 1942, they forced through a series of tax reforms and zoning ordinances.

Previously tax forfeited lands could be claimed at any time, sometimes by payment of as little as 10 per cent of the back taxes. Now the areas in county memorial forests can

(Turn to page 51)

SHADOWS

The leaves are drifting from October trees
Like flocks of birds beneath the windy skies.
Look to the heavens and far along lands
Have turned away the sunlight from our eyes.
When spring first came to nature, then to tell
I tried to be there first to meet the snow.
To welcome home again the coming fall
And all the early Aired Aireds I know,
But I was beaten by the snow this year.
Two came before a leaf was on the tree
And one was curled, "W. A. and the Strong & True"
Crows are smart birds, and they know
Over this land and all the world around
But not one will be left on any one ground.

Joseph S. Smith



The Old Fishin' Hole

By HENRY H. GRAHAM

ALMOST every man in this country had a favorite fishin' hole in his boyhood. It may have contained only insignificant little shiners—no game fish at all. It may have been muddy and unattractive by adult standards. But to him it was the most beautiful bit of fishing water in the whole wide world. To him even the classiest, sportiest streams of the fabulous Rockies had nothing on it. It was here that he whiled away many happy hours as the bees buzzed noisily among the adjacent flowers and a gentle zephyr rustled the summer leaves. He lay on his back, straw hat shading his face against the brilliant sun, and waited for a bite. Or perhaps he lay stretched out on his stomach watching a bright red bobber eddy with the swirling current. When it went under, wow, what a thrill!

Every boy should have a fishin' hole he calls his very own even though it is shared by others. It should be a well-hidden bit of water screened by willows or alders—a quiet, peaceful retreat where he can have the long, long thoughts of youth while he waits patiently for a nibble that will set his heart aflutter. It is a wonderful spot for a boy to dream of ships, far-away places, baseball, swimming and lots of other fascinating things. Here, alone or with chums he can give free rein to his wild, vivid imagination and be a boy in every sense of the word.

The old fishin' hole is a treasure, not only to a boy but to the man that boy becomes when he has lived long enough. The boy enjoys the old fishin' hole in reality; the grownup man usually enjoys it only in memory. But what a sweet, nostalgic memory it is! Nothing can take away a man's memories. He may be old and feeble; he may be bankrupt; he may have lost every friend in the world. But he still has his memories and many of them will be hap-



In such treasured haunts each boy can give full rein to his wild, vivid imagination

py ones. And he will at least have one friend—the old fishin' hole. It will never desert him.

Let us be more specific about old fishin' holes. Now there's mine, for instance. What a delightful place! Bordered by tall cat-tails that were green in the spring and brown in the fall, it was an enchanting place. The water was crystal clear and about ten feet deep on the average. Brightly-colored rocks on the gravelly bottom seemed to sparkle like diamonds in the summer sunshine. Now and then one could see fish of various sizes and kinds swimming lazily in the translucent depths. Just above the hole itself the stream cascaded noisily over polished stones

only to slip into a smooth eddy that softly swished against both banks. Overhead two stately cottonwoods pierced the sky. Muskrats slid nimbly into the water or sunned themselves on a rotting, half-submerged log.

It was to this hallowed spot that several of my young pals and I used to slip away after school, on Saturdays and during summer vacation periods. We loved the summer months most of all because the fish seemed to bite better in hot weather. Often we would take the ingredients of a meal with us and cook it beside the rippling stream. We would stay as long as possible, which meant

(Turn to page 50)

By ROBERT SIMMONS

THE PRESIDENT

STANDING sedately alongside the historic River Road bordering the west bank of the mighty Mississippi, and upstream some 30 miles from New Orleans is the fabulous Locke Breaux Oak, generally conceded to be the world's largest living oak tree. With its circumference of trunk of 35 feet, height of about 75 feet, and spread of approx-

imately 170 feet, it carries the hoary age of exactly 301 years, born in 1657.

Located on what was once the great Providence Plantation estate in St. Charles Parish, and on a site now occupied by a milk firm — Colonial Dairy Products — the majestic tree is completely unspoiled by civilization, growing with the character-

The President boasts 301 years of age



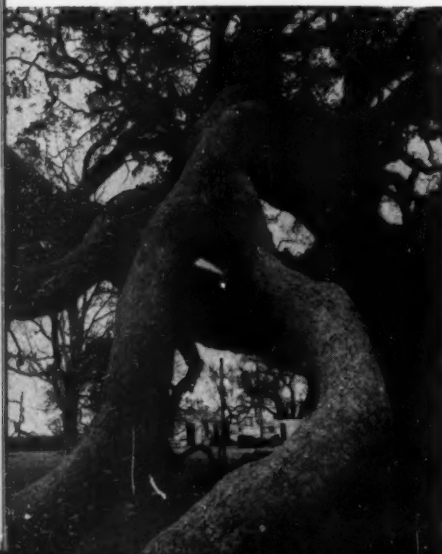
In circumference trunk measures 35 ft.

Tree remains unspoiled by civilization



Stately live oaks symbolize essence of Old South

President continues to grow with characteristic vigor



PRESIDENT

istic vigor of its sturdy oak family after these many years.

In addition to its rugged grandeur and its age, the magnificent Locke Breaux Oak has still another and a most unique distinction—it is an office holder. It is the head of an unusual organization—the President—of the Live Oak Society, an

(Turn to page 56)



President stands near Mississippi's west bank, 30 miles above New Orleans

Fabulous Locke Breaux Oak, the President, is the world's largest living oak





ALASKA,

OUR NEWEST State Alaska is a huge playground one fifth the area of the whole United States. Contrary to public opinion, it is not a land of permanent ice and snow. The 49th State is a "Sportsman's Paradise" where fishing and hunting possibilities are as limitless as the huge wilderness contained within it's borders.

Everything in Alaska is super-colossal. The mountains are higher than the highest in Switzerland. Flowers grow as large as a man's head and even a lowly cabbage has been scaled at 100 pounds. I have caught large fish there with my bare hands. The largest carnivorer in the world, the brown bear, weighing up to more than half a ton lives in the coastal area. These are a few examples of why Alaskans have more to brag about than Texans.

This huge peninsula containing 586,000 square miles, has over 26,000 miles of shoreline, about seven million acres of lakes and many thousands of rivers, including the huge, 2000-mile long Yukon. All this water adds up to endless fishing possibilities for the sportsman who seeks



Two of Alaska's volcanoes—one on right "blew its top," the other is Mt. Edgecumbe

Sportsman's Paradise

Story and Pictures by
DON CARPENTER

privacy. Most of the streams and lakes I have fished did not even show a single boot-print of anyone preceding me and were apparently virgin waters.

These sport fishing resources are enough to make any Waltonian drool. The two best months to fish are July and August, although I have taken both fresh and salt water fish along the coast between April and October. Weather conditions in summer are ideal, if you like rain, because temperature changes between noon and midnight vary only two or three degrees and this "Land of the mid-night sun" is a wonderful place to escape the heat of U.S. cities.

Most fresh water fishermen favor the rainbow trout, the colorful fighter of river and lake. The largest of these acrobatic fish are found in the Kenai Peninsula and the waterways between Cook Inlet and Bristol Bay. Rainbows measuring from one to two and one-half feet long are commonplace there, with the average weight running 5 to 6 pounds.

The steelhead, first cousin of the rainbow, averages still larger than salmo iridius, they run 6 to 20

pounds a copy with top weight around 30 pounds. Both will take artificials, live or dead bait. Single or chunks of salmon eggs are the most popular baits for steelheads. I like a six-ounce fly rod for this kind of sport.

The Dolly Varden trout is found in rivers where salt water meets the fresh. It is a true charr that grows to a hefty 20 pounds or more. At one time Dollys were a bad word in southeastern Alaska and forty Dolly tails brought a bounty fee of a buck to those who caught them. This because it was supposed that Dolly hurt the commercial salmon fishery.

I like Dolly Varden trout. They fight hard, are beautifully colored, and eat like angels when fried a golden brown. Best of all, there are lots of them in coastal streams where the angler has little trouble reaching the fishing grounds. Despite its bad name with local anglers, the Dolly may prove to be in the end a bread-'n-butter fish in Alaska sport fishing.

Cutthroat trout are widely distributed in Alaska fresh water streams and lakes. These speckled beauties



Lt. Col. Don Carpenter, USMC, caught a pair of steelheads with a 2½ oz. fly rod

dote on wet or dry flies and respond to most any kind of artificial lure. I have found them without a guide in nearly all waters rushing through the dense forests of the Panhandle in southeast Alaska. Few fish in Alaska are better eating.

Lake trout, growing to a weight of over 100 pounds are well distributed in this northland. But the visiting sportsman has not yet really discovered them because the best waters can only be reached by plane and bush pilot. Lakers or togue are rated high as a food fish and may be caught with large spinners, spoons and even dry flies when they feed near the surface at the beginning and end of the season.

In central and northern Alaska where temperatures vary from 100 above to nearly 100 below zero are found the great northern pike, the inconnu or shee-fish and the grayling. The latter species of fresh water fish is found mainly in Arctic streams of clear icy water where this colorful fish will hit any kind of artificial fly and fight like a miniature tornado. Grayling are not a large fish. A 20-incher is a real trophy.

Least known of the game fish above the Arctic circle is the inconnu or "unknown" as described by a French explorer. Eskimos call this great white fish "Chi" and the Russians "Nelma." It is anadromous living in both fresh and salt water. It will take bait or artificials, fights like a tarpon and is excellent to eat. Chi range from 10 to 80 or more pounds with the average size around 20 pounds. Air travel may soon open much chi water to sportsmen.

The savage great northern pike is also found in hard to reach waters of central Alaska. This huge fresh water fish grows to a length of four feet and a weight of 40 pounds. Natives use a lot of them for dog food.

Alaska's king salmon and silver salmon are the two best known salmon caught with hook and line. Like many others of the northland's superlatives, the king salmon is huge, records indicate the largest ever caught weighed 126 pounds, was 52 inches long, measured 45 inches in circumference and its tail spread was 17-inches. Deep water trolling with very large spoons will take kings averaging 15 to 50 pounds. I have also used whole herring for bait.

Among the giants of Alaska's fish kingdom is the halibut found in salt water. It grows to a weight of over 400 pounds. I have taken these powerful fish weighing up to 100 pounds with fairly light tackle and have

nearly been yanked overboard when I tried to gill and lift them into the boat. I need say nothing about the eating quality of halibut.

Among the commonest ground fish I caught in Alaska waters was the gray cod, Alaska pollock, Alaska's green fish and the red or scarlet rock fish, called "red snapper" or sunburned trout by yours truly. I found many of these rock fish several hundred feet down in the beautiful waters of the fiords along the Panhandle country.

Alaska fishing licenses cost a dollar for residents and four dollars for non-residents. A resident can buy a combination hunting and fishing permit for only two dollars. Outsiders can get a combination fishing and small game license for \$10. With certain local exceptions, the open season on rainbow, steelhead, cutthroat, eastern brook, Dolly Varden, Mackinaw or lake trout, grayling, and northern pike is July 1 to March 31 in Management units No. 7, 14, 15 and 16. Management units Nos. 11 and 13 are open July 1 to April 30. In the rest of the new state the fishing season is open all year, subject to certain exceptions. Before hunting or fishing in fresh water it is advisable to get a copy of the Alaska fish and game laws, especially if you hope to kill big game which requires a special permit.

No where in these United States is there as great a variety of game for the hunter, as in Alaska. The primeval forests, the tundra or the vast mountain ranges literally are our last frontier for the nimrod. Brown bears grow hefty because they eat great quantities of salmon and can easily gather all the salmon, berrys and roots they need for a balanced diet. Brownies are now closely protected due to overhunting and the decline in salmon spawning runs.

Brown bears are most plentiful on Baranof, Chichagof and the Admiralty Islands along the coast of southeast Alaska. They are powerful and dangerous animals to hunt. A man is a fool to try and kill one with a pistol or lightweight rifle bullet. If the hunter will examine the brown bear skulls in the Alaska Museum at Juneau he can readily understand why bullets bounce off a bear's head . . . the boney plates of the skull are usually four to five-inches thick and the only opening is behind the nose. Who wants to hit this target, no larger than a silver dollar, on a charging bear that moves faster than a race horse.

Brownies have attacked and killed many lone hunters. They seem to

avoid large hunting parties and rarely attack a group because they apparently understand the danger. I am sure they are utterly fearless because I have seen them rise to bat at aircraft that buzzed them. They have muscles like iron and sinews that look like steel cables in a bridge. A layer of fat protects them from most dangers. In my opinion they are not fit to eat, except when very young.

There are more kinds of bears in Alaska than anywhere else. Kodiak bears are famous for their size. Five kinds of grizzly bears; black bears and polar bears and such sub species as the glacier bear and kiddier bear make identification difficult for all but an expert guide.

Alaska mountain goat and the dall sheep rule the mountain ranges. A billy frequently exceeds 200-pounds when full grown. Excessive hunting has brought close protection to these desirable game trophy animals.

Huge moose are still found on the Kenai Peninsula. Caribou are among the most abundant game animals in our newest state. They can be found in the upper Yukon. The Sitka black-tailed deer live mostly on the islands along the lower coast. In out-of-the-way places I have found Sitka deer so tame I only shot them with a pistol, when I needed meat.

A few American elk are found on Afognak Island. Musk ox range on Nunivak Island in the Bering Sea. Some bison or buffalo live in central Alaska. Wolves are found in most Alaska wildernesses. So are a variety of fox, including the silver, red, cross, white and blue fox. Coyote, lynx, wolverine, weasel, otter, squirrels, mink, marten, beaver and a variety of hare or rabbit are the principal fur bearers, not including seals, of which there is quite a variety.

A wealth of game birds are found in Alaska. I was greatly impressed with the number of Canada geese and wild ducks. I found the ptarmagin to be so tame in the wilderness areas that I could kill them with a stick . . . it was not sporty to shoot them. I saw no wild turkeys but did see ruffed grouse and believe-it-or-not found a flock of Chinese ring-neck pheasants on Baranof Island near Sitka, which were probably stocked there by some conservationist. Eagles and ravens are very common along the coastal area.

One last word of caution—don't kill more fish or game than is necessary. Even Alaska's wealth of natural resources cannot last if misused.

Reading
about

RESOURCES



By MONROE BUSH

THE NEW CONSERVATION

SINCE World War II there has been a growing awareness, or awakening, on the part of virtually all well-informed resource specialists to the interrelationships, and in most cases the actual integration, of the several resource management fields. The word "conservationist" has come increasingly to mean a man concerned with the wise preservation of a natural balance between all physical factors in an environment.

This new oneness of the resource picture, this recognition of the essential need to treat every aspect of resource science as a part of a whole, has raised certain problems that were unknown a generation ago—problems which must be resolved in our present generation if the earth's wealth is to be utilized for the sustained well-being of a bursting population.

In general there are two such problems which deserve and demand special attention: how to educate professionals in this new, integrated concept of conservation; and how best to employ the talents of these professionals in work-a-day life, where policy decisions are being made hourly by bankers, lawyers, politicians, and in the last analysis, by the public, which affect every facet of our environment.

In the spring of 1956 the Conservation Foundation addressed itself to the challenge of these problems, and, in cooperation with the School of Natural Resources of the University of Michigan, called a small but influential conference at Ann Arbor of prominent industrialists, educators and specialists. The results of that meeting, together with a well-conceived and executed series of supplementary essays, have now been published as *Resource Training* for

Business, Industry, Government (Conservation Foundation. 1958. 159 pp.). Despite the choice of what is probably the dreariest title of 1958, this little volume is the most significant of all Conservation Foundation publications. If it suffers the neglect usually reserved for such symposia and reports, resource management in the U.S. will be the poorer for it.

Here is hard talk that makes hard sense regarding the education and utilization of broad-gauged specialists in the new conservation, and it should be placed high on every list of "must" reading. Each year there are better books and more enduring books written in the various resource disciplines—technical volumes that are indispensable for effective management. Almost non-existent, however, are books concerned with the methodology of using our wealth of scientific data for the invigoration of the entire physical environment.

"Great advances have been made in the last five decades in broadening the curricula of schools of forestry and in appointing professors with a broad and integrated outlook, but there is still much more that could be done. . . .

"I believe that . . . general education should come as early as possible in the student's career. It has been argued that a specialist with a good grounding in his own field will have no trouble later 'picking up' knowledge in other fields; however, in my experience, the specialist without a broad general background tends to concentrate more and more narrowly on his own subject."

Paul M. Dunn,
from *Resource Training*

Resource Training strikes out boldly in that direction, and for this reason is uniquely valuable.

Of its three sections, Part I comprises a collection of surprisingly fresh essays by nine men determined to see the better and broader application of resource knowledge to actual resource management. Such diverse, distinguished, and widely experienced men as Paul B. Sears, Vincent S. Madison of the Detroit Edison Company, Walter C. Gumbel of the Monongahela Power Company, and Wisconsin banker John L. Stauber, supply some of the most practical writing I have ever seen on the utilization of America's resources. What they say is in itself limited by the length of their pieces, but the viewpoints, the attitudes that they contribute are as broad as the American continent.

To get the "feel" of these essays is to grow in one's own perception of the vast challenge before the new conservation. Foresters in particular should find Paul M. Dunn's "The Forester as a Resource Manager" one of the best things of its kind published in recent years.

Part II is a condensation of the proceedings of the Ann Arbor conference. For conservationists, reading it is very much like sitting in on the talks themselves. Again, as with the essays, brevity limits the substantive content of this report. But there is reflected in its few pages a larger view of the education and wise employment of "generalists" in resource management than is current among either educators or financial and political policy-makers today.

Part III is the slowest portion of this fine book. It consists of the committee reports of the Ann Arbor meeting, and a Memorandum of Agreement establishing the Natural
(Turn to page 38)

ARTICLES OF
INCORPORATION
AND
BY-LAWS
OF
THE AMERICAN
FORESTRY ASSOCIATION
WASHINGTON 6, D. C.



AS AMENDED
OCTOBER 1, 1956

THE AMERICAN FORESTRY
ASSOCIATION

The American Forestry Association is a citizens' organization for the advancement of intelligent management and use of the country's forests and related resources of soil, water, wildlife and outdoor recreation.

Its educational activities, of which publication of AMERICAN FORESTS is one, seek to bring about a better appreciation and handling of these resources, whether publicly or privately owned, in order that they may contribute permanently and in the highest degree to the welfare of the nation and its people.

In addition to publication of AMERICAN FORESTS, which is designed to keep before the people of the country important conservation needs and progress, the Association carries on educational projects in various fields. These include forest fire prevention, reforestation, protection and propagation of fish and wildlife, upstream flood control, prevention of soil erosion, preservation of wilderness areas, establishment of community and state forests, development of forestry by private endeavor, protection of national forests and parks and the dissemination of conservation information among the schools and people of the country.

The Association is independent. It has no connection with any federal or state governments. It is non-political and non-commercial. All its resources and income are devoted to the advancement of conservation. It has been so operated since its founding in 1875. Anyone interested in conservation is eligible for membership.

THE AMERICAN FORESTRY
ASSOCIATION

Articles of Incorporation
and By-Laws

ARTICLES OF INCORPORATION

WHEREAS, THE AMERICAN FORESTRY ASSOCIATION was incorporated under the laws of the District of Columbia for a term of twenty years, which term has expired, so that its corporate existence has ceased and determined by the limitation of its charter; and

WHEREAS, it is desired to incorporate under said laws, a new corporation under the same name and title so that by proper proceedings the existing rights of property and contract of said former corporation may be transferred to and vested in the new corporation.

KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned, each of whom is over twenty-one years of age, and a citizen of the United States, and a majority of whom are citizens of the District of Columbia, being desirous of associating ourselves and those associated with us as aforesaid, for the purpose of converting The American Forestry Association into a body corporate in accordance with the Acts of Congress, relating to the District of Columbia, in such cases made and provided, do hereby certify as follows:

FIRST. The name and title by which this corporation shall be known in law shall be "THE AMERICAN FORESTRY ASSOCIATION."

SECOND. That the term for which it is organized is perpetual.

THIRD. That the objects of the organization are the discussion of subjects relative to tree planting, the conservation, management and renewal of forests, and the climatic and other influences that affect their welfare; the collection of forest statistics, and the advancement of educational, or other measures tending to the promotion of these objects. It shall especially endeavor to centralize the work done and diffuse the knowledge gained.

FOURTH. That the number of directors of this organization for the first year shall be fifteen (15).

IN TESTIMONY WHEREOF, we have severally set our hands and seals this 27th day of January, 1920.

P. S. RIDSDALE,
L. M. CROMELIN,
WILLARD FRACKER.

District of Columbia, ss:

I, George G. Brown, a Notary Public in and for the District of Columbia, do hereby certify that on this 27th day of January, A.D. 1920, before me personally appeared P. S. Ridsdale, L. M. Cromelin and Willard Fracker, to me personally well known and known to me to be the persons whose names are signed to the foregoing and annexed certificate of incorporation, and did severally acknowledge the same to be their act and deed, and that they and each of them executed the same for the purposes therein set forth.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal this 27th day of January, A.D. 1920.

GEORGE G. BROWN,
Notary Public, D. C.

BY-LAWS

ARTICLE I—Name

The name of this Association shall be "THE AMERICAN FORESTRY ASSOCIATION."

ARTICLE II—Objects

The object of the Association is to bring about a better handling of the forests and related resources of the country in order that these may render their highest service in the economic, industrial and social development of the nation. The Association aims to foster and conduct investigation, research, and experimentation in the science of forest production, management and utilization; to assemble information regarding the economic, industrial and social aspects of forests and regarding the service of the forest in protecting soils and waters; to secure from the forest a larger service in outdoor recreation, in perpetuating wildlife, and in other general public benefits; to encourage and further the practice of forestry by individuals, industries, municipalities, states and the federal government; to promote educational, and other measures tending to the accomplishment of these objects; to carry on educational projects, including the publication of a magazine and other literature for the education of the public as to the meaning and importance of forestry and for the dissemination of a knowledge of forestry in its various branches; to place before the people of the country various problems and issues in forestry and to forward, in the interests of the public, specific policies of forestry; to aid in the coordination of the efforts of state forestry associations and other organizations interested in problems relating to forests; to establish and maintain a library; to acquire by purchase, gift, devise or bequest, and to sell, maintain and operate forests and forest lands for the furtherance of the educational purposes of the Association; to acquire by purchase, gift, devise or bequest such property, real or personal, and to erect and maintain thereon such building or buildings as may be necessary or advisable in the promotion of these objects; and in general to do and perform all things necessary to further the foregoing objects.

ARTICLE III—Members and Dues

Sec. 1. Any person, organization, or company may become a member of the Association upon his or its application for membership being approved by the Secretary.

Sec. 2. There shall be six classes of members:

(1) Honorary Members, who shall be such individuals as may be elected by the Board of Directors in recognition of outstanding service in the development of forestry or other related branches of conservation;

(2) Patrons, who shall be individuals who shall contribute One Thousand Dollars or more at one time to the permanent fund of the Association;

(3) Life Members, who shall be individuals who shall contribute to the funds of the Association at least One Hundred Fifty Dollars at one time or in such installments as the Directors may approve. Life and Patron Memberships are not transferable.

(4) Sustaining Members, who shall be individuals, organizations, or companies who

shall pay annual dues of Twenty-five Dollars or multiples thereof;

(5) Contributing Members, who shall be individuals, organizations or companies who shall pay annual dues of Ten Dollars;

(6) Subscribing Members, who shall be individuals, organizations or companies who shall pay annual dues of Six Dollars.

Sec. 3. Honorary Members, Patrons and Life Members shall be exempt from the payment of annual dues but shall receive the Association's magazine for life.

Sec. 4. Dues for the ensuing twelve months shall be payable when an application for membership is approved and annually thereafter. The membership of all those in arrears for three months shall automatically cease. The Secretary, however, may, in his discretion, remit or defer the dues of any member and he may, subject to the prior approval of the Board of Directors, establish term rates for members who desire to pay dues two, three or five years in advance.

Sec. 5. All members shall be entitled to one vote each at the meetings of the Association, or by mail if so provided. Individual members shall be eligible to hold office in the Association. An organization or company may designate one of its representatives who shall have the same voting powers as an individual member.

Sec. 6. The periodical magazine published by the Association shall be sent regularly to all members, its price being included in the dues. The price of the magazine to non-members and to members of organizations affiliated with the Association shall be fixed from time to time by the Board of Directors.

ARTICLE IV—Board of Directors

Sec. 1. The Board of Directors shall consist of fifteen individual members elected by the members of the Association together with the President, Vice-President, five Regional Vice-Presidents, Treasurer, and last prior President during the year next succeeding his retirement from such office of the Association, serving as ex-officio members. The Board of Directors shall have the direction and management of the affairs of the Association, the determination of its policies and the control over and disposition of its funds and property. The Board of Directors shall cause an independent audit of the Association's accounts to be made at least once in each year.

Sec. 2. The Board of Directors shall select each year a Committee on Elections, whose names and addresses shall be published in an issue of the magazine not later than during the month of July. The Committee on Elections shall consist of three members of the Association in good standing for at least three years. Not more than one member of the Committee on Elections shall be, at the time of selection, an officer of the Association. Suggestions for nominations for Directors of the Association to be elected by the membership may be submitted to the Committee on Elections by any member of the Association; nominations for Directors may be made by not less than fifty members of the Association, in good standing, signed by the members submitting them. All suggestions and nominations should be addressed to the Committee on Elections at the main office of the Association and must be received by the Committee on or before September 1. The Committee on Elections shall nominate at least one candidate and not more than two candidates for each Director to be elected at the next annual election of Directors of the Association. The candidates nominated by the Committee on Elections, together with any other nominations which have been

made by not less than fifty members of the Association in good standing and which have reached the Committee on Elections prior to September 1, shall be published in the October issue of the magazine, with the names of members of the Association making the nomination appended to the nomination of any such candidates. The Secretary of the Association shall cause a ballot to be printed containing the names of all candidates and shall distribute such ballots to all members of the Association having the right to vote on or before November 1. The members of the Association shall elect the Directors by mailing their ballots to the Secretary in sufficient time to be received on or before November 30. Ballots shall be so prepared and submitted as to retain the anonymity of the voter. The ballots shall be counted by three tellers appointed by the President. The tellers shall decide any questions as to the ballots submitted and they shall officially certify the total vote cast. The candidates, to the number required to be elected to each office, receiving the greatest number of votes for such office shall be declared elected.

Sec. 3. Any vacancy among the officers, whether occasioned by death, resignation or otherwise, may be filled for the remainder of the year by the Board of Directors. If a Director shall be elected as President, Vice-President, or Treasurer of the Association, the vacancy in the Board of Directors thereby created shall be filled for the balance of the year in the same manner.

Sec. 4. Seven members of the Board of Directors shall constitute a quorum for the transaction of business.

Sec. 5. Meetings of the Board of Directors may be held either at the office of the Association in Washington, D. C., or at such other place in the United States as the President may determine. Meetings of the Board shall be held upon fourteen days' notice, whenever called by the President or by three members of the Board, and a meeting of the Board shall be held at least twice in each fiscal year.

ARTICLE V—Committees

Sec. 1. **Executive Committee.** The Board of Directors may appoint four members of the Board to act together with the President as an Executive Committee which shall have and may exercise the powers of the Board except the powers of amendment of By-Laws or of filling a vacancy in any office, during the intervals between meetings of its Board. Three members of the committee shall constitute a quorum for the transaction of business.

Sec. 2. **Finance Committee.** The President may appoint three members of the Board of Directors to act as a finance committee in advising with the Executive Vice-President and Treasurer with reference to financial matters, and to exercise whatever powers are conferred upon it by the Board of Directors.

Sec. 3. The President shall appoint such other committees from time to time as he may deem necessary to facilitate the handling of Association affairs, or as may be authorized by the Board.

ARTICLE VI—Officers

Sec. 1. The officers of the Association shall be a President, a Vice-President, five Regional Vice-Presidents, an Executive Vice-President, twenty-one Honorary Vice-Presidents, fifteen elected Directors and eight or (during the year following the retirement of a President as provided in Article IV, Section 1) nine ex-officio Directors, a Treasurer, a Secretary, and such other officers as the Board shall

from time to time determine. The President, the Vice-President, the Regional Vice-Presidents, the Treasurer, and the Honorary Vice-Presidents shall be elected annually by the Board of Directors. The Executive Vice-President and the Secretary shall be elected by the Board of Directors to serve whatever term it may designate. The Regional Vice-Presidents shall be elected by the Board, and the geographical Regions shall be determined by the Board. All officers shall serve until their successors are elected.

Sec. 2. Members of the Board of Directors shall be elected as follows: At each annual election five Directors shall be elected for terms of three years each and in addition Directors shall be elected to fill any vacancies which may exist, in each case for the unexpired term of the Director whose position has become vacant.

ARTICLE VII—Duties of Officers

Sec. 1. **The President**—The President shall be the chairman of the Board of Directors and shall preside at all meetings of the Association and of the Board of Directors. In his absence, the Vice-President shall preside; and in the absence of both the President and the Vice-President, the members present at any meeting of the Association or of the Board of Directors, as the case may be, shall appoint one of their number to act as chairman of the meeting. The President shall be ex-officio a member of all committees.

Sec. 2. **The Vice-President**—The Vice-President shall perform such duties as are assigned to him by the Board of Directors and shall assume the duties of the President in case of death or disability of the latter.

Sec. 3. **The Regional Vice-Presidents**—The Regional Vice-Presidents shall perform such duties as are assigned to them by the President or the Board of Directors.

Sec. 4. **The Executive Vice-President**—The Executive Vice-President shall be the managing and executive officer of the Association. He shall have general custody of the records and archives of the Association and, in the absence of the President, shall conduct the business of the Association, subject always to the Board of Directors.

Sec. 5. **The Treasurer**—The Treasurer shall have the custody of the funds of the Association, shall perform such other duties in connection with the finances of the Association as the Board of Directors may order, and shall present to the Board of Directors, at their first meeting each fiscal year a statement showing the receipts and disbursements of the Association for the preceding fiscal year and its assets and liabilities. The annual financial report for any fiscal year shall be transmitted to the members at such time within the following year and in such manner as shall be determined by the Board of Directors.

Checks shall require the signature of two officers or agents of the Association. All officers and agents having such power to sign shall be designated from time to time by the Board of Directors and shall be bonded.

Sec. 6. **The Secretary**—The Secretary shall keep the minutes of all meetings of the Association and of the Board of Directors, shall have the custody of the seal of the Association, shall keep a list of the members with their addresses, shall notify members of the Association and of the Board of Directors of the time and place of all meetings, and shall perform such other duties the Executive Vice-President may require.

ARTICLE VIII—The Chief Forester

The Board of Directors may appoint a Chief Forester who shall be a man of recog-

nized attainments and high standing in forestry matters and shall perform such duties as shall from time to time be assigned to him by the Executive Vice-President.

ARTICLE IX—Official Publication

The official publication of the Association shall be its magazine *AMERICAN FORESTS*. The magazine shall serve as one of the media of the Association for the dissemination of information regarding forestry and related fields of conservation, and shall provide a forum for the discussion of subjects pertinent to these fields. The Directors may change the name of the magazine if in their judgment such action will serve better to carry out the objects of the Association.

ARTICLE X—Meetings

Sec. 1. The annual meeting of the members of the Association for the consideration of such matters as may be considered by the entire Association shall be held in Washington, D. C., or at any other place, on such day and hour as the Board of Directors shall determine.

Sec. 2. Special meetings of the members of the Association may be called at any time by the Board of Directors.

Sec. 3. Notice of the Annual Meeting, and of any special meeting, shall be published in the magazine of the Association at least three weeks before the date fixed for the meeting.

Sec. 4. The presence of fifty members of the Association shall constitute a quorum.

ARTICLE XI—Local Representatives and Affiliated Organizations

Sec. 1. The Board of Directors may designate such representatives of the Association in various Regions of the United States and under such conditions as to compensation or payment of traveling expense as it shall deem wise and desirable in furtherance of the objects of the Association. The local representatives so designated shall perform their duties under the direction of the Executive Vice-President of the Association as the Board of Directors may determine.

Sec. 2. The Board of Directors may, when in their judgment the objects of the Association can more effectively be carried out, approve under conditions to be prescribed by them, the organization of state or regional chapters of the Association; and they may by resolution recognize and designate as organizations affiliated with The American Forestry Association such state forestry associations or other organizations active in or desirous of promoting the conservation of forests and other natural resources, which, in the judgment of the Board, in view of their character, membership, and purposes, make affiliations desirable in furtherance of the common objects of the Association and of the organizations desirous of affiliation. In carrying out the objects of this section, the Board of Directors may prescribe the conditions of affiliation[s] and may fix the price at which the Association's magazine will be furnished to affiliated members.

ARTICLE XII—Amendments

These By-Laws may be amended by the Board of Directors at any regular or special meeting provided notice of the proposed amendments shall be given to all Directors in writing at least thirty days before the date of such meeting. These By-Laws may also be amended by the members in the following manner: Any amendment proposed in writing over the signatures of fifty or more members, shall be submitted to the members with the next succeeding election ballot and shall be adopted if it receives the affirmative vote by mail of a majority of the members voting thereon. All amendments shall be published in the magazine within ninety days after adoption.



The members of The American Forestry Association have adopted a *Program for American Forestry* which recognizes three immediate goals for a national policy in forestry:

1. To meet the essentials of forest protection.
2. To improve the national timber crop in volume and quality to meet all needs.
3. To obtain the maximum of economic and social services from our forests.



Island Challenge

(From page 13)

age the earth, so much the better. If, as in the case of hillside grazing, the taking did incalculable damage, no one concerned himself.

It is not surprising, therefore, that 75 percent of the topsoil has been lost from over one million acres; that perhaps one-tenth the forest remains that was once here, and even this of often poor or useless quality. Here is a place where for a long time indeed the renewable resources have been treated with ignorant abandon. We should be amazed that in the wake of such exploitation the land still produces as richly as it does. That its strength endures to such an extent is truly a miracle of nature's recuperative power.

Yet neither erosion nor deforestation would concern us—for in themselves they are academic subjects—were there not 2,300,000 people living here, literally clinging to the mountain sides, all but pushing one another into the surrounding sea. These men and women have never managed to feed themselves adequately. A huge pineapple cannery or Hilton hotel notwithstanding, at least one-half the population still suffers from malnutrition in varying form and degree. The living level for many tens of thousands of families is scarcely fit for a human being.

Because of this human need the renewable resources of the island are important, and for no other reason. We are not loyal to trees, but to people. To the degree that trees are essential for people, trees command our concern. This is fundamental, and it recognizes the context of human need within which we shall consider the forests, and later the other resources, of the Puerto Rican land.

Of the island's two million acres, roughly one-fourth can be defined as forest land, either as the result of slope in excess of 50 percent, or because the soil is shallow, infertile or poorly drained for agricultural purposes. It is likely that Puerto Rico, before the assault of civilized man, was more than two-thirds wooded. Informed guesses have gone so far as to speak of the virgin land as "blanketed" with forest. The precise figure is immaterial. The pertinent fact to remember is that a once forested island now boasts little more than 100,000 acres in forest cover, or a scant five percent of its land surface.

This represents approximately 100 million cubic feet of all types of wood, running preponderantly to low-quality cull species. Of this pathetically meager reservoir, there is not as much as fifteen million cubic

feet of saw timber on the island.

More than 300,000 acres of potential forest land bears no tree cover at all, and another 150,000 acres is in coffee.

The figures vary with the estimator, but there is no variance among experts in the common conclusion that Puerto Rico has virtually destroyed the community of trees within the island's entire biota.

Only the Caribbean National Forest of 27,000 acres remains intact, together with 5200 acres of purchase unit land to the east. The 6700 acres of federal Forest Service land in the island's central region, the Toro Negro Purchase Unit, is being transferred to the Commonwealth government in exchange for smaller parcels in the national forest itself. This move, ostensibly to consolidate federal ownership, will result in the shrinkage of the island's federal forest land and hence, result in the shrinkage of forest land. Considering forest conditions on the island, the wisdom of what is essentially a retrenchment is questionable.

Within the Caribbean National Forest is the interesting but overpublicized Luquillo Rain Forest, where intensive research is going forward in 50 experimental units to unlock the secrets of tropical forest

management. This aggressive study, together with innumerable well-conceived experiments with mahogany, teak, bamboo, etc., is under the direction of Dr. Frank H. Wadsworth, leader, Tropical Forest Research Center, U. S. Forest Service—as capable and respected a public servant as the United States government ever sent to Puerto Rico. For well over a decade this perceptive, indefatigable forester has struggled to give Puerto Rico the full benefit of the contemporary sciences that pertain to forests and forest products. He has made some progress, despite the pervasive indifference on the island toward all renewable resources. Yet he has not made the progress which the urgent need demands, and could not have done so alone, since he obviously has neither sought nor wanted the political influence which is essential for a task of this magnitude. He and his dedicated colleagues are virtually powerless to work the miracle that is required, without the full and determined backing of those in political authority.

Thus the tolerance of deforestation continues as a basic threat to Puerto Rico's long-term future, for unless the insular government intends to turn Puerto Rico into a vast urban "concrete jungle," this predominately rural people must continue to make its home on the land, as a part of the entire biota. The health and balance of this community of life, this landscape of living things, will affect in a hundred ways the social health of that part of the biota which is human.

Economists and assembly-lines notwithstanding, people cannot remain indifferent to the well-being of their lands and forests, unless they intend to deny their association with the natural world altogether, and withdraw into a make-believe environment of steel and plastic. Luis Muñoz Marín, who is not only the governor of Puerto Rico, but also, in a democratic sort of way, the government, is far too intelligent a leader to condemn his happy, very human followers to such an unhuman existence. He has no choice, in the final decision, but to redeem the land and bring new, abundant health to the land's community of life.

In such an undertaking, it is invariably true that the role of the forests is primary. Whether he wishes it or not, his sensitive insight will compel him, just as it compelled

such comparable leaders as T.R. and F. D. R., to turn forester. When this happens, the progress of Puerto Rico will assume a new dimension.

Some self-styled "realists" scoff at what they call this *mystique* of a healthy land, of man and nature living in creative harmony. While all history underscores this unity of the biota, as documented by such a study as Fairfield Osborn's *Our Plundered Planet*, there are an abundance of economic statistics which bear out this urgency that the hills be planted to trees, and soon. In 1949-50, for instance, the value of unmanufactured wood imported to Puerto Rico was \$29,309. By 1955-56 this cost had almost doubled to \$56,296.

Lumber was imported in 1949-50 at a cost of \$759,898. Six years later the cost of imported lumber has jumped six-fold to \$4,601,072. During this same period imports of manufactured wood climbed from \$171,937 to \$802,658. All told, approximately 80 percent of wood and wood products consumed in Puerto Rico is imported!

The short-sighted opponents of proper land use claim such figures as these have no meaning in themselves. They insist that though New York City has no forests, New Yorkers themselves are economically and socially successful. What they forget is that New York City is a metropolitan community within a much, much larger rural community, while Puerto Rico, despite the wonders of modern transportation, is and must necessarily remain an island. Much of the manufactured goods it requires can and should be imported, purchased with dollars earned in free trade. Yet it is demonstrably unsound, both economically and socially—viewed in the long term—for Puerto Rico to import that which its land is capable of providing. And since Luis Muñoz Marín fully expects his island to be in business beyond the next few years, it is inevitable that his government will recognize this fact.

Modern forestry can, in large measure at least, remedy this extravagance of hundreds of thousands of virtually abandoned acres. It can cause forests to grow where there is only waste today. To accomplish this, however, modern forestry, for all its skills, must have the support of bold political leadership—leadership of the sort that created the achievements of Operation Bootstrap.

The opportunities for the practice of such creative forestry can only

be understood within the context of a forest itself. First to bear in mind is that a forest has literally three levels of contribution to mankind, and these levels are distinguished by the parts of a tree: (1) the roots, (2) the timber, and (3) the fruit.

The root system, except in certain bizarre instances such as the manufacture of briar pipes, provides no direct consumer product. Yet this system and its humus is largely responsible for the storage of ground water. Already Puerto Rican industrialization has been slowed in at least one local instance by a lack of sufficient water, and as the factories and the people multiply, shortages may become commonplace. A survey is presently underway to determine the extent and location of underground water supplies throughout the island. Whatever the results of the survey itself may be, it is no secret that of the forest lands which have been denuded, approximately 75 percent lie in watersheds above existing or proposed major reservoirs.

The timber, and the horizontal above-surface space which timber occupies, comprise the second level of a forest's contribution to human life, with timber the raw material for all wood products, and the horizontal space the "raw material" for forest recreation and its corollary, wildlife conservation. So scarce is this timber, that until recently the sawmill operations were negligible, yielding no more than 600,000 bd. ft. of inferior lumber a year. However, a one million dollar sawmill has just begun producing near the city of Ponce, utilizing the yagrum tree, the wood of which is similar to balsa. Authorities have expressed hope that this may signal a new era for Puerto Rico's lumber industry. Unfortunately, only marketable trees can do that, and marketable trees do not "just grow" like Topsy.

Finally, there is the fruit of the tree, whether apple or walnut or persimmon, which for so many tens of thousands of years sustained primitive, nomadic man. What is today a luxury was once the very staff of life, and the richness of tree-fruits should never be discounted in assessing the contributions a tree culture can make to the society surrounding it. Oranges, mangoes, coconuts, guavas, limes are all suitable to Puerto Rican conditions. Something is being done with coconuts, but far more is possible. Brazil nuts and walnuts would both flourish here. While there are problems in

developing large export markets for much of such produce, the local market is the principal opportunity. With roughly two-thirds of its food imported, the government cannot neglect any possibility for further food production on the island itself.

Thus we see that forests and forest services cannot be dealt with as a single entity. Puerto Rico will have a "forest policy" only when it has first established a water policy, various timber utilization policies, a public lands recreation policy, etc.—and only when sound governmental decisions have been made concerning the economic, and hence social, future of the fruit industry, and related to this, coffee industry.

Basic to what we are saying—the fundamental nature of which has recently been so clearly emphasized by The American Forestry Association—is land policy. One cannot intelligently approach the intricate specifications of sound water management, for example, without first having established points of reference that only a land policy can provide.

Puerto Rico has failed to rejuvenate her forests—that is, failed to achieve that policy that would bring

about a healthy land—first, because the energies of her few but extraordinarily gifted leaders have been directed, perhaps necessarily so, toward putting the industrialization, one might almost say the "commercialization," of the island on a sound footing; and second to this, because the orientation of her government's intelligentsia has been toward the urban opportunities which they, by background and training, most clearly understood.

No one is to be blamed for this. Indeed, everyone concerned with the improvement of Puerto Rican life is to be congratulated for the miracles that are the island's pride and literal joy.

The point is simply that the time has come, despite the persistent problems which accompany industrialization, to persuade the island's half-dozen most effective minds "to lift up their eyes unto the hills," to discover the challenge of vast, mistreated and neglected, but fecund mountains. Here, and in some of the valley and tidewater lands, lies the opportunity of the next decade. The factories are alive. It is time now to make the land live.

Muñoz Marin was quoted recently as replying, when asked "Where do we go from here?" "Man, we are not here yet!" That may be because her land is unrestored and her forests devastated.

We cannot be concerned, just as the Governor himself cannot be, with the technical details of reforestation. Good foresters, working with sympathetic, flexible economists, can handle this in Puerto Rico as they have, when given the chance, throughout the United States. The issue is not what should be grown, where. Ten thousand pages would not exhaust that question. The thing to remember is just that something must be grown to reclaim the soil by utilizing it for forest production.

To fail to attain goals of this sort within the next decade would be to deny the brilliant accomplishments of the past decade. As a starter, the wise reforestation of 25 thousand acres a year, for a period of five years, would be a minimum achievement. Anything less would jeopardize the island's future. Something more would not be surprising, considering what the government of Puerto Rico has already wrought.

Youth's Stake In Small Woodlands

(From page 6)

management plans developed for some of their established camps.

All of this, to get back to your query, causes me to feel that the youth of America could, under proper guidance, undertake a very substantial small woodlands management program. I feel very strongly that such a program could be set up and sparked by some organization such as The American Forestry Association, working in cooperation with many federal and state agencies and organizations such as the Soil Conservation Society of America and its 100 chapters throughout the nation, the Izaak Walton League of America and various forest management and production industries. Quite obviously, organizations and agencies involved with youth should be given an opportunity to participate in this program since it would be one in which the management of small woodlands would be done by American youths.

The organizations named above are merely in the line of suggested groups that might be interested. However, I fully realize that each has its own program but might be willing to enter into discussions in an informal way during the early stages of thinking out this whole matter. I have written this letter as an individual citizen.

In view of the stated farm and small woodland management meetings that will be conducted this fall, it seems that a real opportunity exists to organize and express the thinking of various groups and individuals on this matter of the development of a very strong youth program in small woodland management. If there is merit to this suggestion, then some thought ought

to be given to this approach between now and the start of the meetings this fall—I believe the first one is scheduled for September 10, in St. Louis, according to an announcement I received. This announcement stated that the St. Louis meeting would be open to all interested and will encourage participants to express their views on timber production of small woodlots, and woodlands. A plan is to be developed after information is compared from similar meetings all over the country. You can see from such a statement that if the youths of America are to be strongly involved, then it will be necessary for representatives of youth groups to engage in very strong organized participation in all of these hearings throughout the country.

It seems to me that most small woodlands could be managed by the youths of America. Such a program, once started, and kept alive, could grow into an outstanding conservation program and ought to lead into fine cooperation among many organizations and agencies.

It has occurred to me, as I write, that the Soil Conservation Districts of America should be directly involved in this program in its planning stages and in action. The reason is that already the districts are organized and this particular program could be instituted through district setup. (For some discussion on this point see the article on "Districts, Forestry, and Wildlife Management" by Charles H. Stoddard in the May, 1958, *Journal of Soil and Water Conservation*; pp. 117-120.)

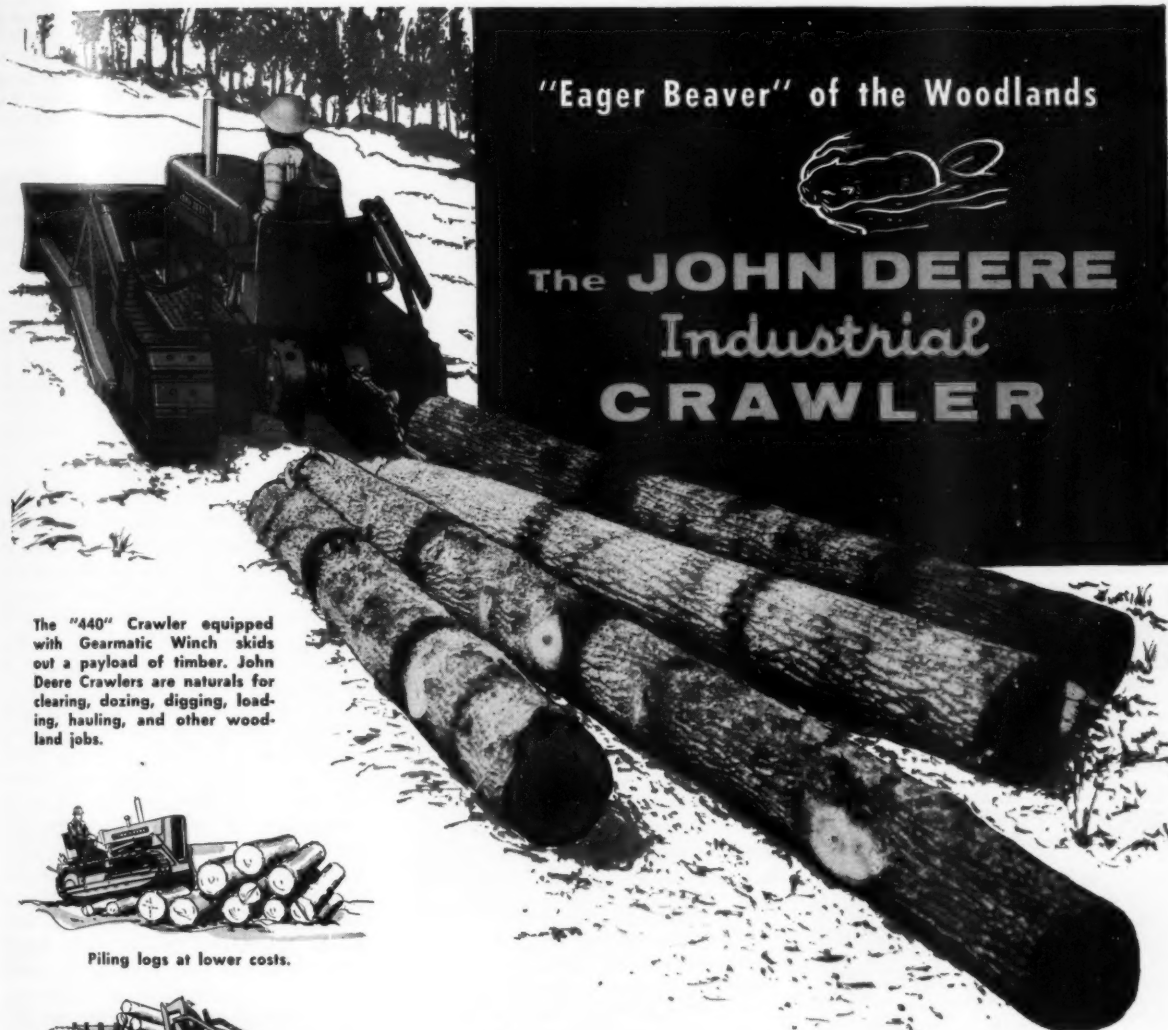
There are indeed all sorts of implications involved in getting a small woodlands man-

agement program handled by the youth of America underway and continued.

I am sending copies of this letter to the United States Forest Service, the Vocational Agricultural group in Washington, the National Association of Soil Conservation Districts, the Federal Extension Service, the Soil Conservation Society of America, the American Forest Products Industries, Boy Scouts of America, the National Wildlife Federation, and Mr. Kirk Fox, here in Des Moines.

In talking this over with Mr. Fox, it was my personal opinion that this program should be made broad enough so that it does not become the program of just one or a few organizations or agencies. There is too much at stake in this program to permit it to be usurped by just one or a few organizations and agencies. However, this does not infer that some organization such as The American Forestry Association, could not "spark plug" the program. It is obvious that some such setup might prove to be necessary to keep the program alive and evergrowing. I can foresee now that organizations such as the Nature Conservancy (interested in discovering and preserving natural areas) and the Outdoor Education Project of the American Association for Health, Physical Education, and Recreation, and the American Camping Association should be strongly involved in the formulation and forward movement of this project. (Copies sent to these three organizations.)

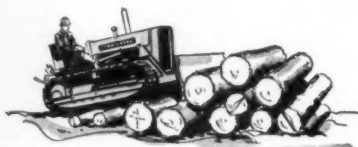
I have deliberately added the three last names to the list of organizations because I have a very strong feeling that small woodlands should be places of many values to



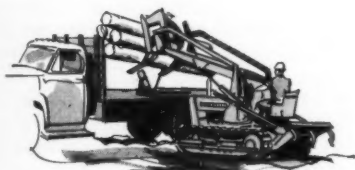
"Eager Beaver" of the Woodlands

The JOHN DEERE Industrial CRAWLER

The "440" Crawler equipped with Gearmatic Winch skids out a payload of timber. John Deere Crawlers are naturals for clearing, dozing, digging, loading, hauling, and other woodland jobs.



Piling logs at lower costs.



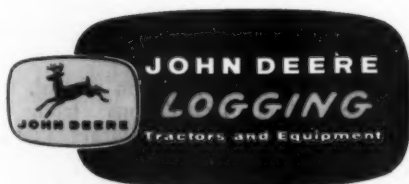
Rapid, low-cost loading jobs.



Hauling logs, pulpwood, finished lumber.

WHETHER you measure your output by log feet of timber or cords of pulpwood, it's sure to reach a higher figure if you've a John Deere Crawler Tractor in camp. No wonder it's called the "eager beaver of the woodlands"—to see this nimble, aggressive unit demonstrate its big appetite for work is to see a picture of time, power, and motion used at their thriftiest.

Economical to buy, to operate, and to maintain, John Deere Crawlers are available either in the rugged standard 4- or 5-roller "420" or in the huskier-than-ever new 5-roller "440" models. Both are available with optional three-way hydraulic systems and clutch-type direction reverser, and a choice of a complete line of woodland equipment.



"Especially Engineered for the Woodlands"

SEND FOR FREE LITERATURE

JOHN DEERE • INDUSTRIAL DIVISION
MOLINE, ILLINOIS • DEPT. D-55-H

Please send me information on ☐ "440" Crawler, "420" Crawler, and Logging Attachments.

Name

Firm

Address

City State

Yukon for men—for women. 100% Down body & sleeves. Light, action-free. Comfortable from mild to 40° below zero. **FUR COLLAR** men's \$47.50, women's \$44.50. **CLOTH COLLAR** men's \$44.50, women's \$42.50. Scarlet, Dead Grass, Smoke. Give suit size & add 75c for shipping.

FREE BEFORE YOU BUY any outdoor clothing, insulated underwear or sleeping bags, **GET THE FACTS** about 100% Prime Down. **SEND FOR YOUR COPY TODAY!**

ORDER WITHOUT RISK—COMPARE! You'll agree ours is far better quality and value, or return for full refund, including shipping costs. **PROVEN! BAUER** Down products are the choice of major expeditions and sportsmen. They are the Original and Genuine—made exclusively in our own factory under U. S. Patents and sold direct, only... never through dealers.

Edie BAUER SEATTLE 4, WASHINGTON DEPT. A

IT'S HANDY...

weighs only 9 oz.; 2 3/4" x 3" x 1 1/8"; easy to carry in pocket, on belt, in car.

IT'S VERSATILE...

ideal for preliminary and supplementary surveying; used as a compass, transit, level, plumb, alidade, clinometer. Shows direction to 1°; level, slope or grade within 1°.

IT'S MADE TO LAST A LIFETIME

"Over 60,000 Brunton Transits since 1896"
See your local engineering supply house or WRITE FOR CATALOG

*Brunton is a registered trademark of

WM. AINSWORTH & SONS, INC.
2151 LAWRENCE ST. • DENVER 5, COLORADO

farm families and communities. There will be other than economic values to be considered. A farm woodlot or small woodland ought to be and mean many things to a farm family and a community. It need not be just a "pulp" or "tree farm" where an owner can make a few dollars on occasion. Under proper management the economic returns will always be present but we must be very careful to develop many other values that are inherent in the small woodlot or other small woodlands.

In summary, then, I submit that the youths of America, could and would, under proper guidance, be able to take over the management of small privately owned forests. The start of such a program should be carefully planned by representatives of

many agencies and organizations. Once such a program is rolling, it is quite likely that youths would take over.

Do you think this is a fair reply to the query that you listed at the end of your talk entitled, "The Challenge to Forest Resources"? I would be very pleased to hear from you.

Again, please realize I am not speaking for the Soil Conservation Society of America. This letter is in the nature of suggestions and an answer to your query.

Douglas E. Wade

Editor

Journal of Soil and Water Conservation
Soil Conservation Society of America
Des Moines, Iowa

Reading About Resources

(From page 31)

Resources Study Committee. There is solid, thoughtful material here, suffering from the usual enervation so characteristic of committee reports. Yet this is inevitable and, considering the caliber of the preceding sections, immaterial. The weight of its title notwithstanding, **Resource Training for Business, Industry, Government** is a simple and unpretentious volume that could be of unparalleled significance, if resource leaders would only read it, and think on what it says.

The New Way of the Wilderness, by Calvin Rutstrum. MacMillan. 1958. 276 pp. \$4.50.

What is more difficult in human communications than to simplify highly complex data for popular consumption? And very likely there is no nonscientific subject more complex than wilderness travel. The conditions one meets are infinitely varied. The men who must meet those conditions are themselves equally varied in capacity. Every adventurer has his own methods for dealing with the unique wilderness problems which he alone has encountered. No two outdoorsmen would solve the same problem in exactly the same way. To write a primer or handbook for wilderness travel is to know in advance, therefore, that you will satisfy all too few of your readers.

Calvin Rutstrum has had the courage to tackle this thankless, but necessary task—necessary, because no one can ever know enough concerning wilderness travel. Every author in this field, however prejudiced his methods or narrow his experience, will invariably contribute data that is important to our common pool of knowledge.

Mr. Rutstrum is unsatisfying

when he writes concerning foot travel, and repeatedly exasperating in his enumeration of supplies so mountainous it is difficult to conceive of a half-dozen horses carrying it successfully, let alone one man on foot or two in a small canoe. His choice of tents is so personal as to be rejected by the majority of us.

Yet **The New Way of the Wilderness** is strong in its treatment of canoe travel, as well as of that "navigation" essential to finding one's location in wilderness. The book is worth its price for these chapters alone. But there is much more valuable information here, for the slow and thoughtful reader. In the midst of a quantity of material, Mr. Rutstrum manages somehow to orient his reader to the physical situation of a man encountering wilderness. The book has a viewpoint or perspective more valuable, perhaps, than its specific data.

It is a work that warrants recommendation to all outdoorsmen, just as long as every reader understands that no book on the subject can be more than a mere contribution. There has never been and can never be a definitive text on wilderness travel. For wilderness itself gives the best and, in a sense, only true instruction, teaching each man something different, and making us all proud that we possess the ability to live in it at all.

Pocket Field Guide to Trees, by William Carey Grimm. Stackpole Co., Harrisburg, Pa. 1958. 143 pp. \$1.50.

This collection of leaf, fruit and bud illustrations from William Carey Grimm's larger **The Book of Trees** is further competition in the growing number of aids to tree identification. While Grimm's drawings

are one of the best-executed sets available, the **Guide** itself suffers from exasperating brevity.

A good case can be made for the omission of bark illustrations, for instance, since bark characteristics change so radically during a tree's growth to maturity. But it was doubtful editorial wisdom to omit any reference to leaf color and texture, to the natural range of trees, to their individuality of conformation, and to the characteristics of their wood and fruit.

And as a "pocket" guide, the book is a tight squeeze. A slightly smaller format, together with the cautious addition of certain data that are almost indispensable to the solution of tough problems of identification, would have made an excellent guide out of one that will be useful primarily for the rankest amateurs, working under ideal conditions.

Wizard With Wood

(From page 19)

Imagine this small, frail craft tossing restlessly on its long and perilous journey, through ice-infested waters and tropic seas, perhaps nosed by inquisitive sharks or bravely weathering a storm. What fairy tale could be more fascinating?

Once a museum sent him a sample of wood encased in bronze fittings with wooden pegs for nails. The old Roman chariot from which it came carried him back through the ages to the shores of the Mediterranean Sea where the wood was grown.

Another specimen took him on a ghostly jaunt to a tomb in the Nile Valley for it was from the mummy case of an Egyptian princess.

Frequently, important questions of commercial use hinged on the result of an examination of a few chips, shavings, sawdust or even wood flour. During World War II he was asked to identify a few shavings from a strange wood used in the manufacture of a gelatinous extract for bandolining the hair to make it stiffer and impart a gloss. It turned out to be "Panhoi," grown only in war-torn China.

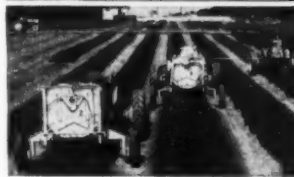
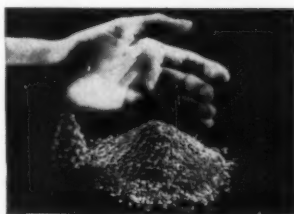
Strangely enough, furriers sometimes availed themselves of Mr. Koehler's knowledge of wood. Sawdust is often used in cleaning furs and although sawdust is sawdust and one kind is as good as another for this purpose, when they became accustomed to one kind they naturally wished to get more of the same.

20 MILLION TREES A YEAR!

PROVES MUSSER KNOWS TREES



better trees make better timber crops - - -



Prime Timber begins with the seed. Experienced foresters with Musser Forests are continually engaged in obtaining the truest strains of seed from mature, hardy, disease-resistant parent trees both in the United States and Europe. Good heredity characteristics through selection of seed is a basic Musser requirement.

Thorough Scientific Culture in Musser nurseries the seedlings develop the strong, extensively branched, compact root system necessary for extracting the most food from the soil of the planting site. This enables them to thrive where inferior stock may fail to survive and the yield and average quality of timber is improved.

New Techniques in fertilization, spraying and handling are studied and tested. The most modern equipment and methods are employed for efficiency and economy.

Musser offers the world's largest selection of quality trees at a price made possible through large quantity production.

YOU PROFIT BY BUYING FROM ONE OF AMERICA'S LARGEST GROWERS

Here are some of the many items listed in our catalog

SPECIAL STRAIN SCOTCH PINE per 1000

Very best Christmas tree strain, from seed collected by our men from selected parent trees. Healthy, sturdy, straight stemmed, rich color.

2-yr. Seedlings, 3" to 6"\$25.00
2-yr. Seedlings, 4" to 8"30.00
2-yr. Seedlings, 5" to 10"35.00

AUSTRIAN PINE per 1000

2-yr. Seedlings, 3" to 6"\$25.00
3-yr. Seedlings, 8" to 14"45.00

NORWAY SPRUCE—Fast Growing per 1000

Seed collected by our men from selected trees.

2-yr. Seedlings, 5" to 10"\$35.00
3-yr. Seedlings, 8" to 14"50.00

DOUGLAS FIR—Hardy per 1000

2-yr. Seedlings, 5" to 10"\$35.00
3-yr. Seedlings, 8" to 12"55.00

BLUE SPRUCE—Superior Stock per 1000

3-yr. Seedlings, 6" to 10"\$60.00

Many other Evergreens, Ornamentals, Shade Trees.

Write for Catalog... with wholesale planting list. Ask for our famous Christmas Tree Growers' Guide.

MUSSER FORESTS, INC.

Box 27-I
INDIANA, PA.

Mr. Koehler would place a few grains under the microscope and from all the trees in the North Woods could immediately tell from what species they came.

When Venetian blinds first became popular, practically every week samples of wood, often the product of the manufacturer's competitor, came to the laboratory for identification. Usually, Mr. Koehler found they were basswood or Port Orford cedar, the standard woods used. Occasionally they were redwood or magnolia, which also give satisfactory service. In any event, he might picture a seaport of Italy where these blinds originated, a city of lagoons, where gondolas take the place of cars and canals are the streets of the city.

Housewives sometimes asked Mr. Koehler to determine whether a sample was heartwood or sapwood. When resistance to decay was desired, the former would be better. For kitchen wares, sapwood might be preferred because of its lighter color.

I once asked him to identify the wood in a desk which had been represented as solid mahogany. When stained, it is hard for the layman to

distinguish it from yellow birch or red gum. He pulled out a drawer, turned it upside down and examined the unstained wood. "Gumwood," he didn't hesitate an instant, "with a thin mahogany veneer."

A friend of mine was more fortunate. She owned an old violin handed down in the family as a genuine Stradivarius. Mr. Koehler peered through the microscope and said "Maple. So far so good for a genuine Strad may be of either maple or spruce." He examined the exquisite finish, shading from orange to red, the secret of which Antonio Stradivari took with him to the grave, then he said, "This is indeed the real thing. It dates back to Italy in the time of the Seventeenth Century."

Occasionally he was asked to identify wood found deep under ground while excavating, perhaps in digging a well. It was usually spruce. Mr. Koehler flips back the pages of history to divulge a secret; namely, that spruce once grew in large quantities throughout Wisconsin. Today it is limited to the northern part of the state.

People often sent him cross sections of trees which had peculiar an-

nual growth rings. Once it was longleaf pine from western Florida. Although he knew nothing about the history of the tree, the cross section, showing its cellular structure and annual growth rings told him of past events as clearly as if he had been an eye witness to what took place.

He noted first that the 1925 annual growth ring was normal. So also was the inner part of the 1926 ring. But the outer side showed "eccentric" growth. He knew that when a coniferous tree is bent downward it immediately sets about the task of erecting itself by reinforcing the under part of the stem with more wood at the expense of the upper part. This "eccentric" growth is abnormal in a number of ways, one being that it tries to expand lengthwise in the tree.

He noted also that the 1927 ring, the last one formed before the tree was cut, showed eccentric growth on the inner portion and practically normal growth on the outer portion. From this he concluded that the tree had been bent to the ground by a strong wind in the late growing season of 1926, probably in September. As a result of the expansion on the

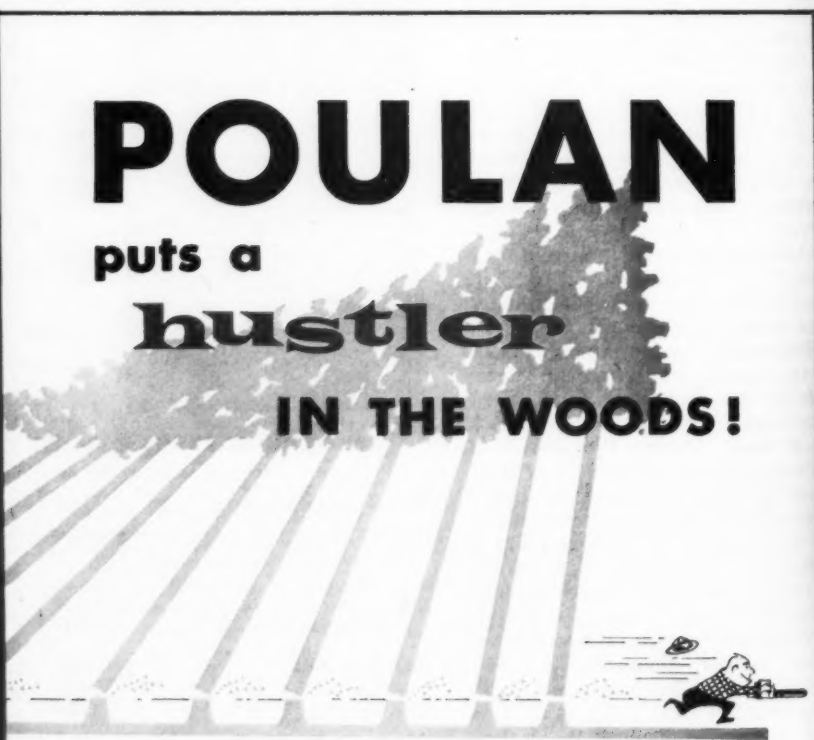


POULAN

puts a

hustler

IN THE WOODS!



POULAN CHAIN SAWS

P. O. BOX 9066 SHREVEPORT, LOUISIANA

FIREBRAKE[®]

lets you
"buy time"
at bargain
rates



best available chemical for retarding forest fires!

HERE IS YOUR NEWEST PROVEN FIRE-FIGHTING TOOL. FIREBRAKE is the unique fire retardant that's making history. FIREBRAKE has been put into strategic action against wild flames on remote rugged terrain within minutes. It has been used to knock down and hold small fires and, in other cases, to establish chemical fire-breaks for the close support of ground crews. So you see, whether FIREBRAKE is cascaded from the air, or utilized for ground attack, it's effective...and it buys time!

FIREBRAKE (sodium calcium borate) is quickly mixed in the field with water, as a slurry, and remains stable. White in color, it is easily discernible after application because it clings to whatever it touches as a protective coating which stubbornly resists flame. Economical FIREBRAKE is nonpoisonous and non-irritating. Find out how valuable FIREBRAKE can be to you... write for literature.

United States Borax & Chemical Corporation
Pacific Coast Borax Company Division • Agricultural Sales Department
630 SHATTO PLACE • LOS ANGELES 5, CALIFORNIA



**BETTER SURVIVAL,
BETTER GROWTH
WITH
ROOTSPRED TREE PLANTERS**



ROOTSPRED "Lake States". Scalper reduces competition 15" each side of planted tree.

Talking through our hat? Missouri Conservation Commission owns twenty-four **ROOTSPRED** Standards; Continental Can Co. uses twenty. **ROOTSPREDS** are way ahead with Christmas Tree Growers.

For specifications, prices, photos, write:

ROOTSPRED

St. Petersburg, Pennsylvania



**IS
THIS
YOU
?**

**DON'T LET IT HAPPEN
AGAIN THIS YEAR!**

**EFFECTIVE PREVENTIVE
AND TREATMENT OF
Poison Ivy-Oak-Sumac
B.Y.'S Medicated Ointment**

**TIME-TESTED—USED SUCCESSFULLY
FOR YEARS BY PUBLIC UTILITIES,
FORESTERS, and INDIVIDUALS
THROUGHOUT THE UNITED STATES.**

ADDITIONAL INFORMATION WILL BE SUPPLIED
UPON REQUEST.

B.Y.'S OF SAN FRANCISCO, INC.
150 HEMLOCK STREET
SAN FRANCISCO, CALIFORNIA

lower side it had indeed been a "strong wind," a hurricane in fact, in western Florida in the late summer of 1926 which bent the tops of the stand of young pines "like stalks of wheat in a summer breeze."

A cross section of Alaskan spruce with a most peculiar spiral structure told a dramatic story of survival in the far north. In this specimen the "eccentric" wood was a continuous formation, round and round, from the center out to within half an inch from the bark. This indicated that it grew in an inclined position, probably on the edge of a glacier, where it was caused to rotate so that different radii of the stem were successively on the downward side, thus causing the eccentric growth to intersect the annual rings, and, as the tree grew, forming a spiral.

"The formation of the eccentric wood began when the tree was six years old," he said. "It, as well as the tree itself, made almost five complete revolutions, requiring from eight to nineteen years for each revolution. When it was cut it was eighty-three years old, according to the annual rings, and the formation of the eccentric wood ceased about twenty-one years previously, which means that the tree must then have assumed a vertical position. But even five revolutions in a life time is doing well for a tree."

From thousands of wood samples Mr. Koehler examined each year, I remember one of them was from a redwood tree which was a thousand years old before the birth of Christ, the annual ring growth revealed that there were periods of drought and floods in ancient times just as there

are today. Scars showed that devastating fires swept through the forests; other scars indicated that there was always the struggle against insects—bark beetles, wood borers, cone moths, twig weevils and root aphids.

It is not surprising that this wizard with wood became interested in its innermost secrets. He grew up in northern Wisconsin in an era when great forests still grew and flourished. His "sand box" was a sawdust pile. He built houses of home-made blocks. Later he handled wood in different capacities, worked with it, learned all there was to know about the different species. Long before he had ever seen a microscope or an X-ray he could distinguish such woods as northern white cedar and western red cedar, which are similar in cellular structure, by their distinctive odors. Blindfolded he could tell Port Orford cedar by its spicy taste. His adult life was dedicated to his work at the Forest Products Laboratory.

Today he is retired from the Forest Service and is living in California but he is still called in as consultant in matters pertaining to wood.

Aside from the Lindberghs, Arthur Koehler is one of the few principals in the kidnapping case who is still living. On display in the laboratory where he spent so many years visitors may still see the section of the ladder taken from the attic of Bruno Hauptmann, mute evidence of a crime which might have been "the perfect crime" had it not been for Mr. Koehler and his uncanny knowledge of wood.

Mike's Backyard Schoolroom

(From page 22)

where the bobwhite quail calls at dusk and dawn. It is the bluets, buttercups and violets that come out in spring; where "God makes it rain when the plants are thirsty." And it is the giant oak tree where the robin nests and raises her young, and where the "sassafras tastes pretty."

Each evening as I sit at the dinner table sipping my after-dinner coffee, Mike takes hold of my arm and says, "Daddy, let's go down in the backyard, now," and I go with him. It is funny how adults forget childhood fascinations. It sometimes takes a youngster to make us once again realize just how exciting the world around us is. I have begun to relive

my early fascinations and renew my appreciation of this old world's wonders through my son.

My wife and I always talked about buying a farm, so that our children could "grow up in the country," but my job calls for city-living. When we became resigned to the fact that we couldn't live in the country, we brought the country in to us. We now have growing in our back yard 30 varieties of wild trees and shrubs. I guess one might refer to it as an arboretum.

West Virginia's State Flower is the Great Laurel or Rhododendron, so I brought home a half-dozen wild ones and planted them in the back.

When Mike goes to school, he won't miss that question. There are hemlocks from the moist valleys of the eastern half of the state, and a dogwood which I removed from the shade that it might flower abundantly. Two redbuds bloomed for the first time last spring after releasing them from shade. The tall, gangly yellow poplars give just enough shade to protect my newly planted pines from the mid-day sun. There are also sourwood, elm, three kinds of maples and a couple dozen other native trees and bushes. And one day Mike will know them all. He is learning them now, one by one, through his constant vigil and his association with things he likes.

Mike knows the dogwood by its opposite branches and remembers its name because when he sees the plant he thinks of the neighbor's dog, which he loves. The maples he can recall, because he knows the breakfast maple syrup comes from them. And the sourwood and birch he can tell in a minute by their sour and sweet tastes, respectively. Someday, he will know them all by name and characteristics, and the more he learns the more he will want to know, I'm sure.

It has been my fondest hope that my children will grow up loving the outdoors as I do, to fully appreciate the wonders which are to be found there. At every opportunity they are encouraged by having pointed out to them the new "mysteries" which take place in nature.

Sometimes, to make the "lessons" more interesting we play games with the plants. These games are a "natural" for keeping youthful interest at a high pitch. Mike is captivated by the duck-billed buds of the yellow poplar tree, and tickled by the mitten-shaped leaves of the sassafras. He is old enough to imagine "a duck on the tree limb," and he knows "I wear mittens like the sassafras leaves," and that the weeping willow is "crying all the time." Through these games, he remembers by comparison that each plant has a special little significant characteristic all its own.

When a part of our back yard was cleared to make room for wild plants and my 150 pines, we almost destroyed one of our most fascinating living attractions—the rabbits. When the brush was cut, the rabbits left. So we planted a multiflora rose hedge around the lawn where the rabbits and quail could find protective cover from cats and dogs. Soon, the rabbits were back in force.

However, it must be admitted that a versatile lawn has its drawbacks. For instance, we hadn't considered that rabbits eat more than clover. If we had, the gladioli wouldn't have been planted where they were. Rabbits cut them down in windrows at the end of the grass line. My wife happened to be admiring an especially beautiful, deep red gladiolus from the kitchen window, when a fat cottontail hopped up to it. As she watched, the bunny chomped down with his double pair of incisors and the tall plant fell like a forest giant before the axe. She didn't quite share my humor in the episode, and thereafter we planted flowers nearer the house.

Then, of course, there were the tomatoes, which the rabbits found delectable just as they turned ripe and juicy, and the pepper plants were clipped to the ground the night after being planted.

Convincing my neighbors that rabbits were worth their trouble was difficult at first, since they too had lost several rows of beans and practically all salads. But the children convinced them. The sight of young bunnies hopping foolishly around the yard and the old mother rabbits kicking up their heels thrilled the youngsters so much that we all

FACTORY TO YOU



SAVE
ABOUT
1/3

ORDER BY MAIL

World's Finest SLEEPING BAGS

Proven! Eddie BAUER sleeping bags are rated the finest by expedition leaders, guides, mountaineers, foresters, authorities everywhere. ALL TYPES: Singles, Twin Sets, Mummies, Station Wagon Bags.

FREE! 64-PAGE CATALOG

BEFORE YOU BUY any sleeping bag, outdoor clothing or insulated underwear, **GET THE FACTS** about insulations. Read what authorities say.

SEND FOR YOUR COPY Today!

Includes tents & other camping equipment

ORDER AND Compare!

NO RISK! You'll agree ours is far better quality, far better value, or we will promptly refund in full—including shipping costs both ways.

ORIGINAL & GENUINE

Made exclusively in our own factory under U. S. Patents. Sold direct to you only... never through dealers, never under other brands.

Eddie BAUER Dept. A
SEATTLE 4, WASHINGTON

safety for you trapping firebug sparks

the GILL Spark Arrestors are almost 100% efficient

Trapping your incandescent exhaust carbon prevents costly fires. That pays you in many safety ways.

You protect your own property and the property of others—with the fully approved Gill Spark Arrestors

—because tests show that GILL Spark Arrestors trap almost 100% of that firebug exhaust carbon.

Made by long-experienced design-and-production engineers, the reliable Gill Spark Arrestors are ready now to give you full safety. Look into the easy application of Gill Spark Arrestors, sold by International Harvester dealers—and others.

for
trucks, tractors,
tugs, forklifts,
loaders, station-
ary engines,
harvesters, etc.



Cyclonic action. Mounts in any position within or at end of exhaust system.



Centrifugal action. Mounts at end only of exhaust pipe.

Pat. & Pats. Pend.



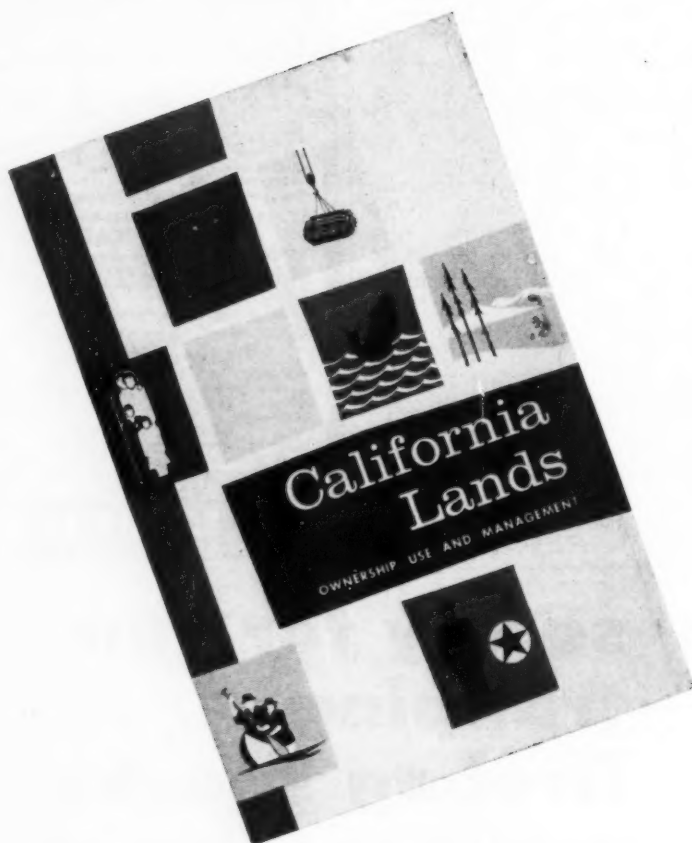
ERICKSON PRODUCTS CO.

1960 Carroll Avenue
San Francisco 24, California

CALIFORNIA LANDS

BY

SAMUEL TRASK DANA & MYRON KRUEGER



California Lands is the final report of The American Forestry Association's California Landownership Study. It deals with the State's land ownership problem and its influence on land management. This book can well serve as a working model for other states and should be read by everyone concerned with land ownership patterns. It is beautifully bound with colorful dust jacket.

308 Pages**PRICE \$4.50****Postpaid****10% DISCOUNT TO AFA MEMBERS**

ORDER FROM

THE AMERICAN FORESTRY ASSOCIATION

919 Seventeenth Street, N.W.

Washington 6, D. C.

agreed our sacrifice was really rather minor to all we had gained.

Some of this back yard school-room philosophy has rubbed off on my neighbor's children. They, too, are getting interested in plants and they love the rabbits and bobwhite quail. Even Mike feels they ought to learn more about these things. Many times I have watched Mike imitate me as he pointed out his little pines and yellow poplars to his friends. Once he forced a twig of sassafras into his small pal's mouth for him to "taste how pretty it is." Another time Mike was showing his buddy a handful of "Virginia creeper," which I found out too late was poison ivy.

The other day a slightly younger friend of Mike's came up the hill screaming, "Mike's gonna let the bug bite me!" Right behind him came "nature boy" with a large praying mantis in his hand. "I'm only showing him the mantis," Mike explained.

Mike is nearly five now, but he has few of the normal fears about insects, worms and "bugs" that a child his age generally possesses. In learning about such things, he has lost his fear in favor of interest in them. He knows full well what the mantis is, because everytime we spot one lying in wait for an unsuspecting grasshopper it is pointed out. Once we found an egg case of the praying mantis attached to a green-brier vine. I told Mike what the case was and then took it inside the house to allow the eggs to hatch out in a glass jar. The thrill that my son found in seeing 200 tiny mantids emerge from that egg case impressed him so that he will never forget it.

Childhood is a time when the world is full of wonders. It must be a truly exciting period in one's life when every new song of a bird, growth of a plant, wiggle of a worm strikes a child's imagination and starts him to thinking and wondering further. All of these things are new and exciting for a boy or girl to see.

My son has much to learn about the good earth. He still gets his trees mixed up and his observations twisted, but that is part of the game in every back yard schoolroom. Despite these shortcomings, however, Mike has learned more in two years of observing in his back yard than some children will learn in a lifetime. He hasn't been pushed; he has been nurtured in what is already his inherent curiosity and love for living things.

Rogue River Country

(From page 15)

and potential sites for winter sports.

Forests comprise the major natural cover and form a pleasing framework for the mountains, lakes, and streams. Their recreation assets may be measured in terms of scenery, wildlife habitat, and botanical interest. Madrona and several types of oak are found between the 700 and 2500 foot elevations. Manzanita and buckbrush are common shrub species at these levels, and the California poppy is abundant. A zone of extensive coniferous forest lies between 2500 and 5000 feet. Douglasfir, ponderosa pine, sugar pine, white fir, and western red cedar are the prevalent species. Trees become smaller and species change above the 5000 foot level where annual temperatures are low. Above timberline the perennial herbs, dwarf shrubs, sedges, and grasses form a colorful carpet when the snow disappears.

The setting of the Rogue River country is complemented by many delightful mountain lakes. These lie along the Cascade summit and range in size from small snow-fed ponds to lakes covering over 100 acres. The lakes are popular for fishing and also form a terminus for enjoyable hiking trips. One of the largest is Lake-of-the-Woods, favored by fishermen and campers for over 30 years. Crater Lake is the most spectacular of the waterbodies; the beautiful blue waters in this caldera attract thousands of visitors annually.

Ideally supplementing the lakes is the Rogue River and its tributaries. The Rogue, in particular, has gained international renown as a fishing stream. The river, approximately 210 miles in length, has its headwaters in the high Cascades. It winds through a deep, steep-sided canyon to the vicinity of its confluence with Butte Creek. For a short distance the river flows in a subdued manner over the more level terrain. Some of the spectacular features of this stream are Ramie Falls, Hardy Riffle, Mill Creek Falls, and the Rogue River Gorge. The Rogue escapes from the interior of the country via a gorge it has cut through the coastal mountains and roars on to the Pacific Ocean.

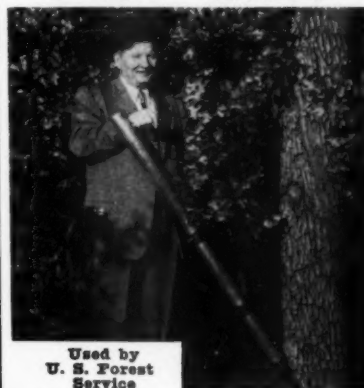
The Illinois and Applegate rivers are the two largest tributaries and possess numerous rapids and considerable white water. Both streams

have their headwaters in the Klamath Mountains and flow in a general northwest direction. The majority of the remaining tributaries are small and fluctuate in size due to the dry summers. Many have local sports fishing importance but for the most part have limited attraction because of isolation and low water.

Fishing is one of the exceptional recreation activities and all areas in the valley have fishing streams within a short driving distance. The most heavily-fished section of the Rogue River is between Grants Pass and Union Creek, where in most places the river is within easy access of the highway.

Guided trips are available at Grants Pass for fishermen or for people seeking the excitement of shooting the rapids of the lower Rogue River. Custom-made shallow draft boats navigated by experienced guides tour the stream between Grants Pass and Gold Beach on the Pacific Coast. The trip takes about five days and provides numerous thrills and excellent fishing for hun-

KILL TREES THIS QUICK, EASY WAY!



Used by
U. S. Forest
Service

The REUEL LITTLE TREE INJECTOR

Makes it easy and economical to cull trees in timber or kill worthless trees in pastures. Easy to use and carry, weighs only 11 lbs. No re-sprouts. Safe for livestock. No crop damage. Cost about \$4 per acre. Sure kill every time. Without obligation, get the facts about this new injection method of killing unwanted trees.

WRITE
TODAY

Free Booklet
sent promptly

REUEL LITTLE TREE
INJECTION CO.

MADILL,
OKLA.

You Get The Finest In Quality Evergreen Stock from SUNCREST NURSERIES

- Hardy, Northern grown seedlings and transplants for better survival.
- Thick, all-year foliage with sturdy root systems from selected seed.
- Quality that is second to none for Water Sheds, Reforestation, etc.

Look at the unusually fine, healthy seedlings shown here. They're the kind of planting stock you get from Suncrest, where every order is carefully graded and packed under the supervision of trained forestry experts. Whether you plant for Christmas Trees, Ornamentals, Hedges, Timber Stands or Soil Erosion, it will pay you to investigate the savings you can make at Suncrest where only the finest specimens of many varieties are grown by specialists.



... Your Suncrest Tree
Profits Never Stop Growing

Send For Illustrated Catalogue
And Planting Guide — FREE.

**SUNCREST EVERGREEN
NURSERIES**

Dept. AF, BOX 305-E, HOMER CITY, PA.



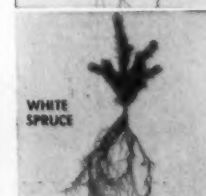
AMERICAN
RED
PINE



BLACK
HILL
SPRUCE



MUGHO
PINE



WHITE
SPRUCE

Perfect Ground Cover for Banks and Shady Places



MYRTLE (Vince Minor)

A neat, sturdy creeping plant that stays green all winter. Blue flowers in May. Resists insects, disease and drought. Our big heavy clumps with 12 or more stems can be planted 2 ft. apart on level; 1½ ft. on slopes. You cover big areas for little money.

100 BIG CLUMPS \$15.00—1000, \$120.00

HARDY EVER-GREEN IVY

Baltic Ivy defies dogs, children and drought. Steep slopes, sun or shade. Space 1 ft.



25 POTS,

\$7.50

100

\$26.00

PACHYSANDRA

Thrives under trees and in poor soil. Beautiful shiny evergreen leaves. Space 6 in. apart.

100 \$9.50

PLANTS,

1000, \$85



KELSEY NURSERY SERVICE
Highlands, N. J., Dept. D-21

LITTLE WONDER ELECTRIC HEDGE TRIMMER

Cuts Full 16 ins. — Weight 5 lbs.



Fully guaranteed. Send for illustrated folder or we will ship prepaid if you remit \$59.50 (in U. S. A. only).

BARTLETT MFG. CO.

3019 E. Grand Blvd. DETROIT 2, MICH.
Makers of COMPOUND LEVER TREE TRIMMERS

8 Patents. Best material. Sold by the thousands.



Infringers and Imitators warned

Best Chrome Steel—Strong, Durable

THE RENOWNED

CHARLES H. RICH

"Forest Fire Fighting Tool"

Write for Prices and Descriptions

THE C. H. RICH FOREST FIRE TOOL CO.
218 West Bald Eagle Street, Lock Haven, Pa.

dreds of sportsmen each year.

The significance of sport fishing is verified by a recent Oregon State Game Commission and United States Fish and Wildlife Service survey. Creel studies showed that sports fishermen took an estimated 575,000 pounds of salmon and steelhead plus an additional 12,000 pounds of resident game fish in one year.

Fish of the Rogue River system can be divided into two groups, resident and anadromous. Chinook and silver salmon, steelhead, and cutthroat trout are the anadromous species. The native sport fish include rainbow and cutthroat trout, in addition to eastern brook and brown trout that have been introduced to the headwaters.

Chinook salmon begin ascending the Rogue in early March or April and continue until November. The spring-run fish move up the stream and lie in deep pools until spawning season in the fall. Silver salmon enter the mouth of the river in September and migrate up the Rogue, Applegate, and Illinois rivers to spawn in December and January. Steelhead trout start their run in April and May and are in the headwaters of the tributaries to spawn from January to April. Winter-run fish enter the mouth of the river from October to February and spawn in all accessible waters of the drainage basin.

Another recreation asset of the Rogue River country is its variety and abundance of wildlife. The forest, mountains, and waterbodies furnish excellent natural habitats. The blacktail deer is the most important of the big game species although mule deer from eastern Oregon occasionally make their way over the Cascade crest. Sometimes Roosevelt elk are seen near the headwaters of the Rogue River. Black bear, moun-

tain lion, and bobcat are found in the isolated mountain areas. Ring-neck pheasant and valley quail are the most abundant upland game birds. Others include mourning doves, mountain quail, and ruffed grouse. Mallards, woodducks, pintails, and a few Canada geese nest in the valley or rest here during migration.

Fishing overshadows the sporting activities to the extent that hunting has never received much publicity in spite of plentiful game. The length of season favors fishing — the hunting season lasts approximately one month while some type of fishing is possible all through the year.

Natural resources for recreation have limited value without development; roads, trails, parks, picnic grounds, and other facilities are necessary to make outdoor activities possible in some cases and more enjoyable in others. Federal, state, and county agencies as well as private enterprise have assumed the responsibility for these needs in the Rogue River country.

There are two federal recreation areas — Crater Lake National Park and Oregon Caves National Monument, which attracted over 400,000 visitors in 1957. Crater Lake, famous for its beauty and challenging genesis, was dedicated as a national park in 1902. The major development is Rim Village which overlooks the lake. The village consists of a lodge with dining and sleeping accommodations, cabins, cafeteria, picnic area, campground, information building, community house, and a museum. Within the park there are four public campgrounds. The one in Rim Village has fireplaces, tables, running water, toilets, hot and cold showers, and laundry trays. The three other camps are located along the entrance roads. Park personnel provide guide service on trails, boat trips, and daily informal talks at the lodge and museum. Naturalists present evening campfire programs in the community house. The park is primarily a summer-use area; however, some roads are kept open during the winter for skiing enthusiasts.

The Oregon Caves National Monument, located in the south-central part of the region, was established in 1909 to preserve this unusual Pacific Northwest cave formation. The principal features are a series of limestone caverns containing stalactites, stalagmites, pillars, and waterfalls. The Oregon Caves Chateau furnishes lodging and dining service. Picnic areas are available but camp-

COUNCIL FORESTRY TOOLS

PLANTING & FIRE SUPPRESSION

SWATTERS—LW-12 FIRE RAKES—BUSH HOOKS

AXES—PLANTING BARS—SPECIAL TOOLS

THE COUNCIL TOOL COMPANY

Fine Edge Tools Since 1886

Wananish, North Carolina

grounds are lacking. There are guided trips through the camps and evening entertainment by park naturalists and resort employees.

Recreation is a major facet of the multiple-use policy of the U. S. Forest Service. A fortunate circumstance in the Rogue River country is the large acreages of forests controlled by the Forest Service. Sections of three national forests—the Siskiyou, Umpqua, the Rogue River have been made more desirable for campers and picnickers by forty-four campgrounds each with tables, fireplaces, water, and lavatories. There are many miles of trails for hiking—the most traveled is the Oregon Skyline Trail which parallels the scenic crest of the Cascades. Limited, wild, and recreation areas have been set aside. Five reservoirs within the forest boundaries are well-stocked with game fish. Other activities associated with these waterbodies include boating, swimming, and waterskiing.

The state of Oregon maintains a number of parks along the Rogue, Applegate, and Illinois rivers. These popular picnic spots are equipped with fireplaces, electric stoves, water, tables, and shelters. They are easily accessible from the highways.

Businessmen, city officials, and civic groups have sponsored a number of events to publicize the area, attract visitors and business, and stimulate spending. The Shakespearean Festival, Gold Rush Jubilee, Emigrant Lake Regatta, and the Rogue River Roundup are the most widely advertised.

The nationally famous Shakespearean Festival is held in the city of Ashland—the festival dates for 1958 are between July 28 and August 29. This is the oldest theater in the United States organized to produce Shakespearean plays on an authentic Elizabethan stage. Twenty thousand people attended the festival in 1956—three-fourths were from outside of the region.

The Gold Rush Jubilee is celebrated in Jacksonville, the historical center of the Rogue River Valley. The discovery of gold in 1851 made Jacksonville a boom town, and for a time it was one of the richest communities in the Pacific Northwest. Many of the original buildings associated with the early exciting history of the settlement still stand. The general theme of the Jubilee is the revival of the past—square dances, gold panning, and other early-time activities characterize the celebration.

Local speed boat enthusiasts spon-

sor the Emigrant Lake Regatta in September. Thousands of spectators see nationally-known racers compete for prizes. Organized riding clubs and sheriff posses schedule the Rogue River Roundup in July. The highlight is the rodeo which lures top performers from all parts of the United States.

The scenery and recreation opportunities of the Rogue River country have been the basis for a significant tourist economy. Oregon traffic counts revealed that 1,725,000 tourists visit the area and stay on the average of one and one-half days. They require food, lodging, automobile service, and equipment for particular activities and spend approximately \$5.43 per day. Businesses that cater to tourists add approximately fourteen million dollars annually to the region's economy.

The tempo of vacation travel and expenditures is accelerating. An estimated 3,454,000 people visited Oregon in 1956—216,000 over 1955. Approximately 141 million dollars was spent in 1956 as compared to 127 million in 1955. The Rogue River country should receive its share of the expected tourist increase. Consequently an increase in accommodations is indicated. Needs

SPIEGEL-RELASKOP

Estimates basal area, Measures tree heights, also diameter at any height.

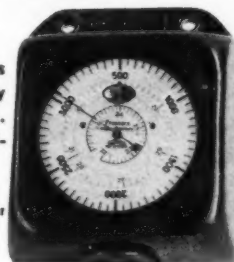
Scales self-adjusting for any slope.

Built in range-finder, Topographic-, Degree- and Percentage scales.



POCKET ALTIMETER BAROMETER

Registers anew every 3000 feet, easily readable scale. Weather-forecaster



Ask for free literature from

WM. A. WOLFF

4051 MAYBELLE AVE. OAKLAND 19, CALIF.

**PREVENT FIRES
SAVE LIVES!**



- 1 Comfortable, easy pack, "Bik" Shoulder straps will not rope or twist
- 2 Maximum water capacity—5 gallons Minimum weight—dry 4½ lbs. Service weight 46 lbs.
- 3 Strong, corrosion resistant bag Neoprene rubber coated nylon fabric
- 4 40" hose and ball bearing hose connectors interchangeable with FS model
- 5 Standard Fedco pump with positive shut-off interchangeable with FS model

A FEDCO EXCLUSIVE

Fedco Smokechaser outfits can be filled from a small remote water seepage using the standard Fedco pump at the rate of one gal. per min.

Fedco pumps have been tested to over 50,000 strokes without loss of pumping efficiency. Even after 5 years of non use Fedco pumps operate as efficiently as when new.

MODEL N

SMOKECHASER OUTFIT

Built to U. S. Forest Service Specifications

A BETTER PUMP BY

FEDCO

MODEL FS

So Simple

A CHILD CAN OPERATE IT!



MODEL FS
THREE MODELS AVAILABLE

DEALER INQUIRIES INVITED

FIRE EQUIPMENT DEVELOPMENT CO.

829 Estabrook St. San Leandro, California

Distributed in Canada by

CANUS EQUIPMENT LTD. OTTAWA, ONTARIO

YOU LOSE WITH EACH FOREST FIRE

Help us stop this needless waste of our country's natural resources. Hand these A.F.A. Book Matches imprinted with your name or advertising to your customers, employees and friends. Keep Forest Fire Prevention in their minds . . . before their eyes at all times. The need of protecting our forests from fires is great . . . and the cost of these fire-preventing matches is modest.



Two of our attention-getting designs are shown here. The first features Smokey, the famous fire-preventin' bear of the State Foresters, U. S. Forest Service and the Advertising Council. This design is in natural color. The second design was developed in cooperation with the national KEEP GREEN program and is a natural green and brown forest motif on a white background. On the KEEP GREEN design you may have your state name imprint on the back at no extra cost. This additional imprint is available only on the KEEP GREEN design.

PRICE SCHEDULE

2500 Match Books in each case—50 cartons of 50 books each.
All prices are for the same design, same imprint to one address.
Shipping charges are prepaid on four or more cases.

1 case	\$25.00	4 cases	\$80.00
2 cases	\$45.00	10 cases	\$175.00
Transportation Collect		Transportation Prepaid	

THIRTY DAYS ARE REQUIRED FOR DELIVERY — SO ORDER NOW!

THE AMERICAN FORESTRY ASSOCIATION
919 17th Street, N.W. Washington 6, D. C.

Date _____

Please enter our order for _____ cases of Bookmatches
Smokey Design _____ Keep Green Design _____

IMPRINT _____

SHOULD _____

READ _____

(Please Print)

Imprint for Back (KEEP GREEN Design only) should Read: KEEP _____

GREEN _____

SHIP TO: _____ Check enclosed _____ Bill us _____

NAME _____

STREET _____

CITY _____ STATE _____

will range from picnic and camp grounds, to large, complex, multiple-use recreation areas. Much of the task of providing more recreation facilities will be under the jurisdiction of the United States Forest Service, National Park Service, Bureau of Land Management, and the State Parks Division of the Oregon State Highway Department.

The Rogue River country has the necessary attributes for a vacationland. The diverse activities range from catching steelhead in white-water streams to seeing a thrilling performance of Midsummer-Night's Dream. Orderly development is assured through government stewardship of public lands. Tourism is on the march in the United States—the Rogue River country can satisfy the vacation desires of thousands.

Ambassador's Wife

(From page 21)

in Guanajuato Province where the same general situation exists—no trees and an acute water shortage. "It was most unfortunate," she told us, "but many years ago the people there cut down all of the trees. Since that time we have had very little rain, and many years without any rain at all." Then she added proudly that "my grandfather planted some trees there a long time ago for shade and ornamental purposes. Trees that didn't require much water like pepper, mesquite and oak. Today they are the only trees in the whole area, and we have some water too!"

Señora Quintanilla spends as much time as possible down on the ranches where she is also trying to improve agricultural production. They specialize in beef cattle and crops such as corn, beans, wheat and lentils, but because of the water shortage she is trying to find some crops that need less water. To improve irrigation they built a dam last year with government help (the government paid 66% of the cost) under the agricultural assistance program.

She had nothing but praise for this agriculture program of the Mexican Government. The Señora explained that after the big land reform movement in the late 'thirties, when much of the land was divided up into 600-acre parcels, many of the farmers didn't know how to operate the land properly. So after several years the government inaugurated an assistance program. "It's been in operation for six years now, and has

proved to be a tremendous success. Under the program the government not only offers technical advice, but provides the means for helping to purchase machinery and improve facilities necessary for sound management," she said.

The Señora told about another project she had just initiated on their ranches. "Since alfalfa is the best crop, we get eleven crops a year there while the average is only eight, and alfalfa is excellent for dairy feed, I decided to take a course in dairying at the University of Maryland." (She has also taken courses in floriculture, beekeeping and photography while being a diplomat's wife.) Last month she shipped 15 Holsteins down to the ranch to start production, and when we were talking with her she had just returned from checking on their arrival.

While chatting with Señora Quintanilla we mentioned that we had also heard that she was a bull fighter. She laughed and said she did enjoy the sport but was only an amateur. "I fight the bulls on the ranch just for fun. Actually we use the bull fights there as a method of testing their blood strains."

Then we learned of her other hobbies, fishing and photography. She produced a picture taken just the previous week of her prize catch—three huge sail fish. In commenting on her other pastime, photography, the Señora told us of a rather frightening experience she had last summer. "My brother and I went to visit the Grand Canyon, but arrived too late for the burro trips to the bottom of the canyon. So we decided to hike down the path by ourselves. Just as I snapped a picture, we heard a rumble and ran to escape an avalanche. When the picture was developed, it showed the avalanche coming right toward us."

When we asked how she managed to find the time to pursue these avocations while fulfilling her obligations as a diplomat's wife, she told us that "the work is most interesting for the men in the foreign service, but the women don't have much to do except for the social activities—and that gets rather tedious." She does spend quite a bit of time traveling with her husband on his diplomatic missions to Latin America, and has become well acquainted with the continent.

The Señora enjoys diplomatic work and said that she had been a member of the Mexican Foreign Service for several years before her marriage. We learned that after she graduated from the Women's Uni-

versity of Mexico, she worked in the Foreign Office in Mexico City. Then she was transferred to Washington, D. C., with the rank of vice consul—quite an accomplishment for any woman.

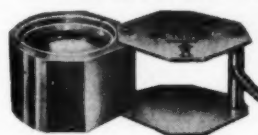
When we inquired about a glass case in the room filled with ribbons and medals, she said they had all been awarded to her husband by grateful governments—primarily from Latin American countries, France and China. Then she laughed and pointed to two small medals almost hidden among the ribbons in the case. "Those are mine," she said, explaining she had received them for work in the Red Cross when they were in Cuba.

At that point the conversation turned to Señora Quintanilla's really favorite topic—her husband—and we found out that there were many more facets to the character of this diplomat extraordinary. First, he is an author of note, having published two volumes of poetry, and has written books on the theater, philosophy, religion, international relations, Woodrow Wilson, and Latin American problems. And, second, that he has been a professor and lecturer at many leading universities and colleges in this country, including Harvard. We also learned that the Ambassador is chairman of the Washington Pan American Club, and chairman of the Washington section of the Philosophy Society.

The Ambassador received most of his education at the Sorbonne, University of Paris. He was awarded a B.S., M.A., and Diplôme d'Etudes Supérieures de Philosophie degrees there, but received his Ph.D. from Johns Hopkins University in Baltimore.

a Stratex spec' for scientists!

STEADFAST STAINLESS FRAMES
— STABLE OPTICS . . . COST NO MORE!



\$12
U.S.A.
&
Canada

Tops for Technology, Entomology, Silviculture!

3 matchless lenses, wave length tolerances—water-white, thermal shock-resistant cemented. Maximum width of color-free field. Top forest practice, training, deserve Stratex Triplet 10X! Stratex Doublet 10X for tight budgets \$6.00

SPECIFY IT!
: Factory shipments
: if your dealer's
: out of stock.

SUDDEN LOGGING ESTIMATES

— POCKET CONVENIENCE!



\$3.
In U.S.A.
&
Canada

Husky cruiser rules, with crisp jet grads on pearly aluminum, defy brush, dense cover—fold to pocket size. Instantly pin-point mensuration variables with Biltmore, Doyle, Scribner DC, International 1/4, 66 ft. Merritt Hypsometer, Engineer Chain Scales. Weighs only 4 oz. Dept. AF 98

STRATEX INSTRUMENT CO. 
3515 SUNSET BLVD. LOS ANGELES 26, U.S.A.

PLANTING ? TREES

Use a "FORESTER" or
"CONSERVATOR" Planter

Complete information
on request

UTILITY TOOL
& BODY CO.

Clintonville, Wis.

Own Your Own Tree Farm

McCurdy Bros. Nurseries will help you with A Million FREE Trees, 1,000 FREE trees to the first 1,000 new tree farmers who apply for them. Write for full particulars to McCURDY BROS. NURSERIES, Dept. B, MANTON, MICHIGAN.

—40 MILLION SEEDLINGS FOR THIS FALL'S PLANTING—

"I guarantee this stock is highest quality and most reasonably priced on the market. Order and you will be convinced," says McCurdy. Compare these prices:

	Per 1000
Scots Pine, French Green, Age 2-0, Size 2-6	\$15.00
Scots Pine, Royal Blue, Age 2-0, Size 4-6	15.00
Austrian Pine, Age 2-0, Size 4-6	15.00
Austrian Pine, Age 3-0, Size 6-10	16.50
Red (Norway), Age 2-0, Size 4-6	15.00
Red (Norway), Age 3-0, Size 6-10	16.50
White Spruce, Age 3-0, Size 6-10	20.00
Colorado Blue Spruce, Age 3-0, Size 3-10	30.00
Colorado Blue Spruce, Age 2-0, Size 3-5	20.00
Special prices on quantity orders, low as \$12.00 per 1,000.	

"VISITORS ARE WELCOME AT OUR NURSERIES"

McCurdy Bros. Nurseries

MANTON, MICHIGAN



Gordon McCurdy with 1½ year old Scots pine seedlings available for this fall planting.

NURSERIES AT MESICK AND
WELLSTON, MICH., CASS LAKE, MINN.

Marvin Pruners Model PH-3



All These Advantages

Close Easy Cut

Easily Repaired

Longer Life

Lighter

Wt. 1 lb. 12 oz.

**Made From Forged Steel
Aluminum Die Casting
And Precision Ground
All Parts Replaceable**

WRITE FOR INFORMATION
AND PRICES

**FRED MARVIN
ASSOCIATES,
INC.**

1968 Englewood Ave.
AKRON-12-OHIO

PANAMA

- B.B. Fan Drive Pumps
- B. B. Slip-on Units
Pump and Engine
- Slip-on Units Complete
Pump, Engine, Tank, Complet-
ing Materials, All on steel skids
- Compensating By-passes
- High Pressure Hose
- Pistol Grip Cut-offs
- Combination nozzles
- Vacuum Lift Systems
- Automatic Float Valves
- Tree Marking Guns
Pressure Type
- Stainless Steel Drip
Torches
- Flame Guns
- Angle Gauges
For Estimating Basal Area

Write For Free Catalog

PANAMA PUMP CO.

410 So. 37th Ave.
Hattiesburg, Mississippi

Wilderness Bill Stymied In Senate

(From page 7)

sure, whatever it may be, suspect.

On this, President Johnston said, "Now, let's not read bogeymen into this business that may not be there. What we all want here is a bill that will suitably recognize wilderness as a bona fide use of the national forests. Such statements as 'Gifford Pinchot is turning over in his grave' are premature here. Did it ever occur to you this deal may wind up by strengthening the insect, disease, fire and grazing management on all these wilderness areas and parks?"

One thing that was rankling some members of AFA judging by their telephone calls and letters was that a brochure supporting the Wilderness Bill by the Trustees for Conservation had found its way into their hands. Some of them reported it said that *American Forests* was now supporting the bill but a check of the brochure showed that it had merely stated that *American Forests* printed the entire Wilderness Bill in its original form, which is true. The brochure did not say that *American Forests* is supporting the bill, which it definitely is not. This answer did not completely mollify members who insisted that the brochure "left the

inference" that the magazine was supporting the bill by listing it with other magazines and newspapers whose support of the bill is well known. The amount of comment on this one isolated incident would tend to indicate considerable grass roots interest in the proposed bill and constitutes another reason for early western hearings as endorsed by AFA at the Senate hearing.

Keen interest in the widely-discussed Indian clause in the bill had been evinced prior to the Senate hearing and it was of interest that Senator Murray, in opening the hearing, said this language would be amended out. The attitude of both Senators Murray and Neuberger, who chaired most of the hearing, was conciliatory and their chief interest would seem to be a bill eminently suitable to a majority of users of the public lands. This coincides with AFA's own position which is a matter of record and shows that the association favors suitable recognition of this use of the public lands which would not, at the same time, infringe on the duties and responsibilities of those administering agencies most concerned.

The Old Fishin' Hole

(From page 25)

as long as our respective parents permitted. Sometimes we were so late that Dad grew worried and came after us. Always the trip home was a sad one. We were a much merrier lot on the way to the creek.

Most of the fish we caught were undesirable ones like suckers and chubs. But now and then a sleek, colorful, hard-fighting trout took our worm-baited hooks and this always made the trip a huge success. Boy, what excitement! But we even had fun pulling in the trash fish. Even if we wouldn't eat them ourselves our cats at home loved them so we never threw them away.

Finally, the time came, as it always does, when we weren't boys any longer. Yet we still paid occasional visits to the old fishin' hole, if only to re-live the past. These visits became farther and farther apart until they ceased altogether. But I know that my boyhood pals, wherever they may be, often think longingly of the old fishin' hole. Some of them

have crossed the Great Divide and I hope with all my heart that there's an old fishin' hole in Heaven as fine and beautiful as the one they knew here on earth.

Do you remember the old fishin' hole of your youth, Reader? Surely you had one. If you didn't you missed one of boyhood's greatest pleasures for fishin' should be a big part of just being a boy. If you did have one I know it occupies a prominent place in your heart, for dozens of men have told me that of all the treasured haunts of their early life this one came first. Several of them have let me know they're going back to it after all these years. Again they are going to sit on the bank, rub their bare toes in the soft mud, watch the fleecy clouds drift by and perhaps even toss in a hook just in case there's still a big one waiting in the dark shadow of that moss-covered log. And who knows? Maybe there really is!

Forester's Notebook

(From page 23)

be retained for long-term management. However, the counties still lose good plantations or other desirable stands of young timber through loopholes in the land laws. In fact the law is so flimsy that the federal government and private timber companies refuse to accept county lands until the title has been quieted by court action.

Correction of this situation by the state legislature through enactment of a statute of limitations is said to be the most urgent need at present.

Another obstruction to more efficient land management is the inability of county and state governments to exchange intermingled properties. While the State of Minnesota owns much of its own land in fee, it also holds county lands in trust. This circumstance enables opponents to block land exchange on the ground that it is unconstitutional for the state to swap land with itself. Pulling this cork also requires legislative action.

On the plus side of the ledger, zoning ordinances have saved the counties thousands upon thousands of dollars. Zoning of agricultural and forest land keeps new settlers from getting into undesirable situations. It saves the county the expense of maintaining roads and operating school buses into isolated areas. Sometimes a poorly located rural resident can exchange his unproductive property for a better site to the mutual advantage of both parties. Yet here again the spectre of shaky land titles holds back desirable adjustments that would stabilize the tax base.

The county commissioners have considerable interest in getting new industries established but dislike to sell stumpage that will be processed outside the county. They would prefer sales to resident operators, then both the stumpage and the labor contribute to the local economy.

This phase of county economics led to some pointed comment about Indian reservations and a suggestion that they be purchased by the state and put into production. Indian stumpage is sold to the high bidder and the proceeds divided among tribal members. Consequently, the county gets nothing but must maintain the roads and schools. Other lands under federal supervision return a share of the income (national forests—25 per cent to the county plus 10 per cent for roads).

In answer to a direct question about disposal of Indian lands, one commissioner said that 9 out of 10 people in his county would prefer public to private ownership.

"This protects our right to hunt. Besides, trees grow just as well on state land. Furthermore management should be close to home so local people can have some say about what's going on."

Other comments, after the meeting, indicated doubt regarding the proportion in favor of public ownership; however, it was obvious that the public land agencies are held in high esteem in Minnesota.

One reason is the alacrity with which the State Conservation Department is tackling the unemployment problem in the northern counties plus the memory of earlier Civilian Conservation Corps accomplishments. This region has been hit hard by the recession induced shutdown of the iron mines, a softening of timber markets and last season's crop failures.

On July 17, 1958, Minnesota launched a new conservation program with an emergency appropriation of \$1,500,000. Within hours of Governor Freeman's "Go Ahead" signal, forestry officials lead by Commissioner George A. Selke and his Deputy, Clarence Prout, had placed half of the 2500-man labor force on woods projects.



Edick BAUER
Down
UNDERWEAR

TWICE
AS WARM!
as any other
insulation known
to science.

Far Better!
100% Prime Northern Goose
Down will not lose its
efficiency or cause
perspiration as
other insula-
tions do.

ORDER BY
MAIL

FACTORY
TO YOU
Not Available at Stores

COMPARE!
You'll agree ours is far
better quality and value
or your money back.

PROVEN!
BAUER Down products are the
choice of the major expedi-
tions and sportsmen. They are
the Original & Genuine —
made exclusively in our own
factory under U. S. Patents.

SHIRT
\$18.95
PANTS
\$18.95
Add 25c
each for
shipping.
SIZES:
S, M, L, XL

FREE
64-page
CATALOG

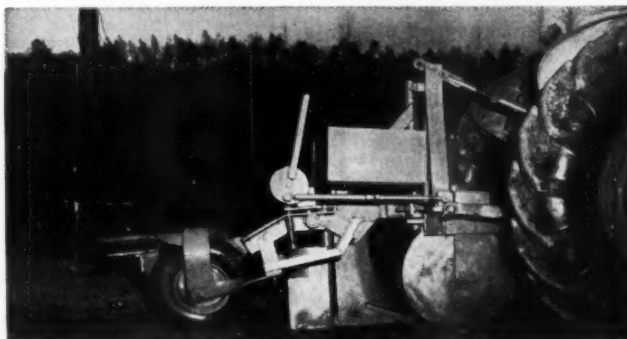
Edick BAUER
DEPT. A SEATTLE 4, WASHINGTON

BEFORE YOU BUY any outdoor
clothing or sleeping bags,
get the **SCIENTIFIC FACTS**
about 100% Prime Down.

Send for Your Copy Today

FIVE YEARS IN THE MAKING

24 DIFFERENT MODELS OF PLANTERS
NEW • IMPROVED • FIELD TESTED

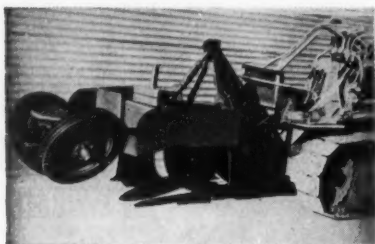


THE WHITFIELD CONTOUR TRANSPANTER

MODEL 54-BA

The Ideal Machine for Contour Planting and Underplanting

R. A. WHITFIELD MFG. CO., Gordon Rd., Rt. 2, Austell, Ga.



SCM MODEL TREE PLANTER

Available for D2, T6, TD6, 40C 420C.

Our five distinctly different models are designed for deep penetration and high survival in all soil conditions and terrain.

No distorted roots when Lowther machines are used.

For Details write:

HARRY A. LOWTHER COMPANY

P.O. Box 1412

JOLIET, ILL.



Cutter Snake Bite Kit

The Smallest Effective Kit on the Market!
Weighs only 1 1/4 oz. Contains 3 suction cups, knife-blade, antiseptic, lymph constrictor & easy instructions. Everything needed for suction treatment — the only first aid method approved by medical authorities. Works on insect bites, too!

If not available at your drug or sporting goods store, send \$2.50 cash, check, M. O. (no C.O.D.'s) to:
Cutter Laboratories, Berkeley, Calif., Dept. 76-L.

CUTTING TOOLS For Woods, Brush, Briars — SAFE
LIGHT — EASY TO USE — RAZOR SHARP
Also Heavier Models for Forestry Work.
WRITE FOR FREE ILLUSTRATED FOLDER.



THE VICTOR TOOL CO.
OLEY 469 PENNA.

**When Writing Advertisers—
Please Mention
AMERICAN FORESTS Magazine**

Sweating young men industriously began pruning all the pine trees in sight to improve the quality of future growth. Wiser heads soon channeled this buoyant energy to choice trees, leaving the scrubs to act as trainers. Axe men girdled wolf-trees to provide growing space for better species, lopped brush to reduce fire hazards, and cleared rights-of-way for public access to deep blue lakes. Others began to construct camp grounds, repair flowage dams and pursue allied activities.

The Conservation Commission had a \$3,500,000 backlog of planned work so there was no waste motion in selecting the jobs to be done. By staggering crews the project can be extended through the fall season to permit cone collection and planting.

The location of work projects is determined by the percentage of unemployment in the county and the severity of crop failures. All laborers are certified by the local unemployment commission to the Conservation Department.

If Rip Van Winkle had rubbed his tired old eyes in northern Minnesota, he would have witnessed a scene familiar to all who labored at the launching of the Civilian Conservation Corps. Kelly-Howe-Thompson's wholesale hardware depot in Duluth immediately cleaned out of hand tools. Officials mumbling about red tape while gleefully cutting it into little bits. Payrolls, contracts, authorizations. More red tape. But running through it all the zest and glory that foresters everywhere feel in tackling another emergency. You just can't keep a fire horse in the barn.

The Navy and Conservation

(From page 18)

these lands determine the resource management practices which are followed. Obviously, it is impossible to open up for public hunting, areas in which thousands of tons of explosives or fuels are stored. Therefore, these areas can serve as reservoirs from which excess game may be trapped and transferred. The impact areas where live ammunition is fired in training programs are also too dangerous for public access. It is interesting, however, to note that the impact areas normally abound with wildlife.

Our personnel have carried out many projects for the benefit of the wildlife which exist on the reservations. State game technicians survey the wildlife populations and the

OPPORTUNITIES FOR COLLEGE GRADUATES

to obtain

COMPLETE PROFESSIONAL TRAINING IN FORESTRY

are available in one of the curricula offered at the Yale Forestry School. This two-year course, established in 1900, requires no previous training in forestry and leads to the Master of Forestry degree. For further information write to

SCHOOL OF FORESTRY YALE UNIVERSITY

New Haven 11, Connecticut



HAS IT OCCURRED TO YOU?

There are many members and friends of the American Forestry Association who find it impractical to contribute to its educational activities during their lifetime. Gifts in the form of a bequest are welcomed. Officers of the Association will gladly consult at any time with those who wish to know more about designating gifts for educational work in forest conservation.

Following is a paragraph suitable for incorporation in wills:

"I hereby give, devise and bequeath _____ to The American Forestry Association, Washington, D. C., a non-profit District of Columbia corporation, or its successor, or successors, for the purpose of promoting the corporate activities of said Association."

THE AMERICAN FORESTRY ASSOCIATION

919 Seventeenth Street, N.W.
Washington 6, D. C.

habitat and recommend measures which should be effected. For example, at Quantico, there is ample cover and water but food for quail is lacking, therefore, approximately three hundred annual and perennial food plots have been established. The wild turkey population was limited by the amount of green food available in the winter; therefore, thirty-one acre plots of winter wheat or ladino clover have been established to provide the salad without which the turkey cannot live. At Camp Pendleton, in California, which is in a semiarid region, there was plenty of food and cover, but availability of water limited the number of quail and deer which could survive. On advice of the California Game Management Supervisor "Gallinaceous Guzzlers," (water catchment and underground storage tanks) were constructed to provide a constant source of water for the quail. The abandoned windmills and drinking troughs were repaired to provide water for the deer. As indicated, the requirements for survival of wildlife differs according to the climate, the food, cover, and water available and the military use of the land.

These programs have increased the opportunities for our personnel and their dependents to enjoy the benefits of clean outdoors recreation.

Each of our installations has been faced with its peculiar problems and has attempted at a local level to arrive at an appropriate solution. Some installations naturally did a better job, or possibly had an easier job than others. Continuity in any program, whether it was soil conservation, forestry or fish and wildlife management, depended on the interest shown by each succeeding commanding officer. All too frequently one interested individual would establish an excellent program only to have his successor allow it to lapse because his interests lay in a different field of endeavor. Analysis of those installations which maintained continuously effective programs revealed that three conditions existed. First, there was an approved plan; second, there were funds, either appropriated or non-appropriated; and third, and possibly most important, there was a civil service employee permanently assigned to the program.

As we gained experience with these problems presented by the soil, water, forests, fish and wildlife, it became apparent that we of the "Sea Service" not only needed assistance

from people who were trained to solve these problems, but we needed to establish a program which would ensure continuity in the management and conservation of these resources. Mr. Gates invited several individuals who are nationally known and respected for their work in conservation, to be members of a civilian advisory group to recommend conservation policy to him. This advisory group currently consists of Dr. Ira Gabrielson, president of the Wildlife Management Institute, chairman; Dr. Richard McArdle, chief, U. S. Forest Service; Dr. Daniel Janzen, chief, Division of Sport Fish and Game of the U. S. Fish and Wildlife Service; Mr. Ernest Swift, executive director, National Wildlife Federation; Dr. Edward H. Graham, director, Division of Plant Technology of the Soil Conservation Service; and Mr. Michael Hudoba of *Sports Afield* magazine. This group has been most helpful to the Department of the Navy.

We have also employed a conservation consultant at each Naval District and River Command Public Works Office. These men who are experienced in land management and the management and conservation of all renewable natural resources, provide liaison between the Naval installations and the several state and federal conservation agencies who assist us with our problems. We feel it is much better to cooperate with and coordinate our programs with existing agencies and programs than it would be to set up our own corps of conservationists. We have in the past received a tremendous amount of help from the Soil Conservation Service, the Forest Service and the Fish and Wildlife Service as well as from various state and private conservation agencies.

Our new program is designed to

FOR SALE

**Slash, Loblolly, Longleaf
and
Shortleaf pine seed**
In Wholesale quantities

Treated with rodent and bird repellent for direct seeding

Write for price list
and simple planting
instructions

**SOUTHERN SEED
COMPANY**

BALDWIN, GEORGIA

**TREE FARM
MANAGEMENT SERVICE, INC.**

Consulting Foresters

Forest Inventories, Appraisals, Reforestation,
Management Plans and Services

1166 7th Avenue West

Eugene, Oregon

Sterling 3-0693

ADams 2-7242

ALBERT G. HALL

FORESTRY RELATIONS COUNSEL

CONSULTING FORESTER

810 18TH ST., N.W.

WASHINGTON 6, D. C.

USE FOR
LEVELING

CHECKING
ROAD GRADES

MEASURING
TREE HEIGHTS

TOPOGRAPHIC
MAPPING

DOES 4 JOBS BETTER



**LEUPOLD
Engineered
ABNEY LEVEL**

4 standard scales held in milled slide ready for immediate use without removing and reversing arc frame. Micrometer control of index arm for more accurate readings. Bubble magnifier adjusts internally—no eyepiece to retract for carrying.

Complete with 4 common scales. \$33

Degrees • Per Cent
Topographic

With saddle leather case and Abney Level Handbook.

LEUPOLD HAND LEVEL. Exclusive internally adjustable bubble magnifier. Leather case. \$13.95 At Dealers or Send Check or M. O. (No C.O.D.'s)

**LEUPOLD
ABNEY LEVEL
HANDBOOK**
Illustrates and describes how to make full use of Abney Level. 23c



LEUPOLD & STEVENS INSTRUMENTS, INC.
4445 N. E. GLISAN STREET • PORTLAND 13, OREGON

THE BOOK SHELF

Members of the Association are entitled to a discount of 10% from the publishers price of books on forestry, conservation and related subjects. We offer only a partial listing of such books and you are invited to order others on the same subjects, whether listed or not.

THE AMERICAN FORESTRY ASSOCIATION

919 - 17th Street N.W.

Washington 6, D. C.

THE AMERICAN FORESTRY ASSOCIATION

Knowing Your Trees—Collingwood & Brush	\$ 6.00
Teaching Conservation—Beard	1.50
Trees Every Boy and Girl Should Know	.50

TREES

American Trees, A Book of Discovery—Platt	\$ 3.50
Deciduous Forest of Eastern North America—Braun	10.00
Field Book of American Trees and Shrubs—Mathews	3.95
Fundamentals of Horticulture—Edmond, Musser, Andrews	6.75
Illustrated Guide to Trees and Shrubs—Graves	6.00
Natural History of Trees—Peattie	5.00
Standard Cyclopedia of Horticulture—Bailey, 3 Vols.	52.00
Tree Care—Haller	5.95
Trees for American Gardens—Wyman	7.50
Trees of the Western Pacific Region—Kraemer	5.50

GENERAL FORESTRY

Forests For The Future—Loehr	\$ 3.50
Forest History Sources of the United States and Canada—Neiderheiser	3.00
Forest Policy—Greeley	6.00
Forest and Range Policy—Dana	6.50
Forest Valuation—Chapman & Myers	7.75
Forests and Men—Greeley	3.95
Indian Forest and Range—Kinney	4.50
Introduction to American Forestry—Allen	6.50
The Biltmore Story—Schenck	3.95

FOREST MANAGEMENT

Aerial Photographs in Forestry—Spurr	\$ 6.50
American Forest Management—Davis	7.50
Applied Forest Management—Bruns	5.00
Applied Silviculture in the United States—Westveld	6.75
Developing Farm Woodlands—Preston	5.50
Forest Inventory—Spurr	8.50
Forest Management—Meyer, Recknagel & Stevenson	6.00
Forest Pathology—Boyce	8.50
Forestry and Its Career Opportunities—Shirley	6.75
Management of American Forests—Mathews	6.00
Plant Pathology—Walker	10.00
Principles of Forest Entomology—Graham	6.50
Soils and Soil Fertility—Thompson	6.50
The Federal Lands: Their Use and Management—Clawson & Held	8.50
Tree Crops—A Permanent Agriculture—Smith	6.00

LANDSCAPING AND CARE—GARDENS, TREES, FLOWERS

Encyclopedia of Gardening—Taylor	\$ 5.95
Field Book of Western Wild Flowers—Armstrong	5.00
Garden Flowers in Color—Foley	3.95
Guide to Home Landscaping—Bushey	4.95
How to Landscape Your Grounds—Johnson	3.50
Plant Buyers Guide—Steffek	7.50
Shrubs and Vines for American Gardens—Wyman	8.00
Successful Gardening Without Soil—Ticquet	2.75
Using Wayside Plants—Coon	3.00
Wild Flower Guide—Wherry	3.95
Wild Flowers of America—Rickett	5.95

WOOD—ITS MANUFACTURE AND USE

Air Seasoning and Kiln Drying of Wood—Henderson	\$ 6.50
Concise Encyclopedia of World Timbers—Titmuss	5.00
Harvesting Timber Crops—Wackerman	7.00
Library of Pulp and Paper Manufacture—McGraw-Hill	31.50
Structure of Wood—Jane	9.50
Textbook of Wood Technology—Brown, Panshin & Forsaith	
Vol. I	8.50
Vol. II	10.00

BIRDS, WILDLIFE, HUNTING AND FISHING

After the Sun Goes Down—Blough	\$2.75
Audubon Western Bird Guide—Pough	4.95
Audubon's Birds of America—Vogt	11.95
Birds Are Yours—Lemmon & Eckelberry	2.25
Books of Wild Pets—Moore	6.50
Deer of North America—Taylor	12.50
Field Guide to the Birds—Peterson	3.95
Fish Ponds for the Farm—Edminster	3.95
Fishery Science—Rounsefell & Everhart	7.75
Hunters Encyclopedia—Camp	17.50
Land and Wildlife—Graham	5.00
Natural History of Birds—Wing	6.75
On the Trail of Vanishing Birds—Allen	4.50
Ornithologist's Guide—Hutson	10.00
Our Desert Neighbors—Jaeger	5.00
Reptile World—Knopf	7.50
Return to the River—Haig-Brown	5.00
Round River—Leopold	3.50
Snakes and Snake Hunting—Kauffeld	3.95
Songbirds in Your Garden—Terres	3.95
Spinning for Fresh and Salt Water Fish in North America—McClane	4.95
The Last Passenger (pigeon)—Johnson	2.75
Wildlife Cameraman—Kjelgaard	2.75

CAMPING

Alaskan Adventure—Williams	\$ 5.00
Canoe Camping—Handel	3.00
Canoeable Waterways in New York State—Grinnell	5.00
Let's Go Camping—Zarchy	3.25
Outdoorsman's Cookbook—Carhart	2.95
Trails Unlimited—Coffin	3.00

BOOKS OF GENERAL INTEREST

America's Natural Resources—Callison	3.75
American Resources—Whitaker & Ackerman	\$ 7.50
Bears in My Kitchen—Merrill	3.95
Conservation—Coyle	5.00
Conservation Yearbook 1956—Kauffman	7.50
Conservation of Natural Resources—Smith	6.75
Decorating with Pods and Cones—Van Rensselaer	4.95
Fables for Foresters—Guthrie	3.50
Fieldbook of Natural History—Palmer	8.50
Geography of the Northlands—Kimble, Good	10.50
Hunger Signs in Crops—A Symposium	4.50
Interpreting Our Heritage—Tilden	3.50
Man's Role in Changing the Face of the Earth—Thomas	12.50
Our Nation's Water Resources—Moreell	3.50
Our Plundered Planet—Osborn	3.50
Reclamation in the United States—Golze	8.50
Soil Conservation—Bennett	12.00
They Knew Paul Bunyan—Beck	4.75
Vegetation and Watershed Management—Colman	7.00
Western Land and Water Use—Saunderson	3.75

JUVENILE

First Fish—Colby	\$ 2.00
Junior Book of Camping and Woodcraft	3.50
Lookout For The Forest—Blough	2.25
Trees Every Boy and Girl Should Know	.50

ensure that each of the resources is properly and continuously managed. The plans are prepared under the supervision of the public works officer who requests the local soil conservation district to conduct a soil survey and prepare a soil conservation plan. The regional forester of the U. S. Forest Service is requested to conduct a forest inventory and prepare a forest management plan, and the director of the state fish and game department is requested to prepare a fish and wildlife management plan. Normally fish are supplied by the U. S. Fish and Wildlife Service.

Each of these plans must be coordinated with the primary military purpose for which the installation exists. For example, there is little use in conducting an intensive forest management program in an impact area where the timber will contain armor-piercing bullets and shell or bomb fragments. These metal fragments would quickly destroy a saw or a pulp chipper. On the other hand, since the future safety of our nation requires that we produce all of the wood products that we can, there is no valid reason why we should not practice intensive forestry and produce quality timber in the areas between our storage structures on the Naval Ammunition Depots. We now employ full-time foresters and conduct intensive forest management programs at all Naval and Marine Corps installations which have sufficient timber resources to justify their salaries. At smaller installations the program is conducted in accordance with the recommendations of federal and state foresters who make periodic visits to ensure that the forest management plan is being properly implemented and to periodically revise the plan as required by changes in the military land use.

The conservation of water which has been a major problem in the West is rapidly becoming a problem in the East. At Camp Pendleton all waste water is, after purification, returned underground. Each year many thousands of acre-feet of water are pumped from deep wells, used, purified, and returned underground where it seeps down through the purifying soil to the deep well where it is once again pumped up for use. The Marine Corps installation at Quantico, Virginia, has suffered from a water shortage each summer for many years. Last year, by constructing a dam at a strategic location in

one watershed, water which previously was lost into the ocean, may now be stored in a 450 surface acre lake and when needed it is easily diverted into a stream where it flows into the existing water supply system. Needless to say this lake has already been stocked with bass and blue gills by the U. S. Fish and Wildlife Service.

Considerable progress has been made in the preparation of the land management plans and in their implementation. Our progress is however limited by the amount of appropriated funds available to accomplish the work. It is difficult for a commanding officer to initiate a new program at a time when the funds given him for the operation and maintenance of his station are being curtailed.

Recently the Department of the Interior approved the withdrawal from the public domain of 791,106 acres in the state of Nevada for a Naval aerial gunnery range. The provisions included in this withdrawal order present an excellent example of multiple-land-use. During the grazing season, no gunnery practice will be conducted, the area will be available for use by sheep and cattle. Hunters, fishermen, and trappers will have access to the area during January, February, March, May and October, and on all Saturdays, Sundays, and legal holidays. State fish and game laws will apply. The Navy will not appropriate or use any of the water in, on, or under the lands. The management of the timber, oil, gas, and minerals remains a responsibility of the Bureau of Land Management. Thus, this land is available for training personnel for the defense of our country but it is also available during the appropriate seasons for the ranchers and sportsmen.

In conclusion, it would be only fair to say that we have learned much about land and resource management in the few years that we have been large land holders. We have made mistakes but we have learned from those mistakes. We realize that we have needed and shall continue to need the help which has been so enthusiastically extended to us by federal, state, and private conservation agencies. We hope that our current plans and programs will not only assist us in the performance of our military mission, but that they ensure that the condition of these renewable natural resources will all be improved because of our stewardship.

TREES FOR SALE

American Abervitas, Balsam Fir, Englemann Blue Spruce, White Pine, Scotch Pine, Norway Spruce, White Spruce, etc. Prices reasonable and trees are GUARANTEED TO LIVE. Write for FREE illustrated folder. WESTERN MAINE FOREST NURSERY COMPANY
Dept. F Fryeburg, Maine

TREES FOR FOREST PLANTING PINE • SPRUCE

Firs, Arborvitae and Other Conifers. We raise all our trees in our own nurseries.
KEENE FORESTRY ASSOCIATION
KEENE, NEW HAMPSHIRE

SEEDS TREE.. SHRUB

E. C. MORAN
Stanford, Montana



SEND FOR
FREE
CATALOG
Pikes
Peak

CHRISTMAS TREES
★
SHADE TREES
Seedlings & Transplants
Ornamentals & Roses
Nurseries Indiana, Pa.
Dept. B P. O. BOX 670

HOUSE FOR RENT

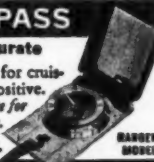
LONG ISLAND, Sands Point, Port Washington, N. Y. Cottage on twenty-acre estate, near wild life preserve; 3½ rooms, \$100 per month. Best references required. Write to: Box 98, The American Forestry Association, 919 17th Street, N.W., Washington 6, D. C.

SILVA COMPASS

Simpler - More Accurate

Recommended by foresters for cruising. Easier to use, faster, positive. Direct course readings. Write for free literature and instructions.

SILVA, INC., Dept. A, La Porte, Ind.



CATCH THEM ALIVE AND UNHURT!



**Catches More!
Easy to use!**

Amazing HAVAHART trap captures raiding rats, rabbits, squirrels, skunks, weasels, etc. Takes mink, coons without injury. Straying pets, poultry released unharmed. Open ends give animal confidence. Fully guaranteed. No jaws or springs to break. Rustproof. Sizes for all needs. Send for booklet on trapping secrets illustrated by Carl Burger.

HAVAHART, 155-S Water Street, Ossining, N.Y.

Please send me FREE new 40-page booklet and price list.

Name _____
Address _____

The President

(From page 27)

assemblage of more than fifty other giant live oak trees in Louisiana, Mississippi and Texas, which are believed to be or known to be more than 100 years old.

Any mention of this comparatively little known organization should include an account of its origin and its creator: Its founder was the late Dr. Edwin L. Stephens, president of Southwestern Louisiana Institute at Lafayette. Dr. Stephens formed the Live Oak Society to publicize the necessity of preserving the grand old live oaks in the South and the planting of new ones for the future enjoyment of nature lovers.

In drawing up the society's whimsical constitution and by-laws—"to promote the culture, distribution and appreciation of the live oak"—

Dr. Stephens obviously worked in a light-hearted vein: Membership, he set out, would be confined to "individual live oak trees, known or suspected to be more than 100 years old." Live oak trees less than a century old may become members of the "Junior League" and attain senior standing when "grown up."

By virtue of its size, the Locke Breaux Oak has been president from the start. Other officers include Vice-Presidents, a Committee of Elders, and a Group of Illustrious Individual Specimens.

Each oak belonging to the organization must be represented by a mortal agent, or attorney, who sees that its annual dues of 25 acorns are paid into the treasury at the Southwestern Louisiana Institute Live Oak

Nursery at Lafayette. He must also care for his charge and record data on the trunk circumference, approximate height, diameter of spread, and date of measurement for the files of the Acting Secretary.

Time-honored and stately, sun-swept or rain-swept, the noble live oaks are the very essence of the tranquil, easygoing Old South. In the words of Dr. Stephens, "The Live Oak is one of God's creatures that has been keeping quiet for a long time, just standing there contemplating the situation without having very much to say, but only increasing in size, beauty, strength and firmness, day by day . . ."

The 20th Century on its highest echelons has produced nothing more graceful or charming.

State Studies On Small Woodlands Urged

(From page 6)

spect to small woodland owners and produce as many different opinions as there are persons present as to program needs, including some who will undoubtedly feel that we are already doing too much for small woodland owners. If private foresters are included—and they certainly should be—the validity of data presented only by a federal source is going to be challenged. In other words, there will be no agreed-on point of departure.

I would suggest that if such a conference is to be significant, the Forest Service should consider requesting the state forestry association in each state to appoint a study commission, which would serve for either a year or two years, to dig out the facts about the small-woodland-owner situation in the state or in major sections of the state. For example, trends in small-woodland-owner participation in tree planting and stand improvement should be studied. An objective look should be taken at the intensity of assistance given by industry, sweeping the propaganda aside. The same look should be taken at the intensity of assistance being offered by public programs. Such a study commission should also undertake to come up with a list of major program opportunities which have the best possibility of getting the most results for effort expended.

The Forest Service, if funds could be made available by them, could cement the possibility of state forestry associations undertaking such a study by agreeing to take care of the cost of a consultant to such a commission, with the consultant to be approved both by the Forest Service and the association. In a study of this kind you always need, if the study is to be carried out over a year or two years, someone who will, and is able to, devote continued effort to it. Someone is going to have to do the leg work and dig out factual information, study resource data, study trend data, etc. How-

ever, if this is done and the forestry association in each state calls such a conference, since the forestry association represents both public program agencies, industry and timber growers, there will be a much better atmosphere for consideration of the recommendations which would come out of the study commission.

I have mentioned these ideas to the president of our forestry association, one of the directors of the public relations council, and to Phil Griffiths, assistant state forester. I want to discuss them with Dean Preston, who is out this week, and with Fred Claridge, who is out this week. If it appears that they are in agreement and the president of the forestry association is also, the president of the forestry association may well write a letter to Dr. McArdle containing these suggestions.

The Forest Service may wonder what business we have in this matter. Following the close of our forest fire conference sponsored by the association, I strongly recom-

mended that the next such event sponsored by the association should be a small-woodland management conference; and I believe that the time is ripe for one—and for a very successful one. Therefore, I would not like to see something done in haste that would take the steam out of such a program. Such conferences take a lot of preparation even if you do not have a study commission ahead of time. We spent six months on arrangements for the fire conference, which was attended by 2,000 persons.

This is for your information. If, at your discretion, you think that McArdle or Swingler should hear about it, do not hesitate to talk to them. I do not know what final decision is going to be made by the leaders I have mentioned here. There is a possibility they may get a letter along this line later on.

John Gray
Forestry Extension
North Carolina

Forest Service's Small Woodlands Meetings

Date	Location	Date	Location
Aug. 12	R-9, Wausau, Wis.	Sept. 22	R-7, Charlottesville, Va.
Aug. 20	R-9, Richmond, Ind.	Sept. 24	R-1, Helena, Montana
Aug. 28	R-9, Lansing, Mich.		R-2, Rapid City, S. D.
Sept. 4	R-9, St. Paul, Minn.	Oct. 15	R-8, Jacksonville, Fla.
Sept. 9	R-7, Boston, Mass.	Oct. 21	R-2, Lincoln, Nebr.
Sept. 9	R-8, Little Rock, Ark.	Oct. 23	R-2, Manhattan, Kansas
Sept. 10	R-9, St. Louis, Mo.	Oct. 29	R-8, Wilburton, Okla.
Sept. 16	R-7, Philadelphia, Pa.	Nov. 3	R-6, Olympia, Wash.
Sept. 17	R-8, Columbia, S. C.	Nov. 6	R-6, Salem, Ore.
Sept. 17	R-14, Coeur d'Alene, Idaho	Nov. 12	R-8, Montgomery, Ala.
Sept. 19	R-3, Santa Fe, N. M.	Nov. 13	R-8, Macon, or Atlanta, Ga.
		Dec. 9	R-8, Jackson, Miss.



Keep yourself in the money-making picture
with the **HOMELITE**

7-Month Guarantee

7 21

Put yourself and keep yourself in the money-making picture with the Homelite 7-21 gear-drive chain saw.

You put yourself in the money-making picture because the 7-21 cuts so fast so well. It fells trees up to 7 feet in diameter, cuts 20" trees in 18 seconds. It weighs only 21 pounds* and is easy to handle in even the roughest terrain. You have a choice of straight blades from 14" to 60" to match any cutting job. And for special cutting jobs, there are clearing bar, brush cutter, and 14" and 18" plunge-cut bows available.

You keep yourself in the money-making picture because the Homelite 7-21 stands up under day-in-day-out cutting. With the Homelite Magic 7 features . . . (1) new cylinder design has 12% more cooling area (2) tough, drop-forged, counter-balanced crankshaft gives smooth performance (3) revolutionary intake valve increases engine power (4) finger-tip plunger pumps oil directly to chain (5) automatic governor cuts engine wear (6) automatic clutch stops chain when throttle is released (7) large air filter keeps out sawdust, dirt, snow.

And the Homelite 7-21 is guaranteed for 7 months!

*less bar and chain



Manufacturers of carryable
pumps, generators,
chain saws, blowers
In Canada:
Terry Machinery Co., Ltd.

HOMELITE
A DIVISION OF TEXTRON INC.
4209 RIVERDALE AVENUE, PORT CHESTER, NEW YORK



Gear-drive

21 pounds*

Cuts 20" trees in 18 seconds

Have a free demonstration at your nearest Homelite dealer.



Profitable crops like this



grow from site preparation like this!

Growing a profitable crop at the lowest possible cost is a matter of carefully planned forest site preparation. It calls for the choice of methods best suited to the operation. It also calls for the selection of equipment best suited for each particular job. To aid in the selection, Caterpillar has kept close tabs both on the use of different methods and equipment to evaluate their effectiveness. Some of the methods and machines used are shown here. Cost results on methods and machines have been compiled on the following subjects: Stump Treatment; Stump Clearing and Tree Cutting; Chaining; Raking and Windrowing; Harrowing; Planting. For information, write Logging Section, Caterpillar Tractor Co., or call your nearby Caterpillar Dealer. You'll find him listed in the Yellow Pages.

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

Caterpillar, Cat and Traxcavator are Registered Trademarks of Caterpillar Tractor Co.



SHEARING AND STUMPING: Standing live oaks in a cleared area went down fast before this Cat D8 Tractor equipped with Rome K-G blade. Trees, 18" to 81" in diameter, were hit by the stinger at height of 3' to 4' above ground level, sliced and pushed over. Stump tops were sheared at ground level in one or several passes.



RAKING AND WINDROWING: Working in hammock lands with live oaks up to 72" in diameter, this D9 utilized a multi-application rake as a felling, raking and windrowing tool. Merchantable timber had been harvested, but no clearing completed. A D8, D7 and No. 977 Traxcavator with rakes handled the less dense areas.



HARROWING: After an area of hardwood, mixed pine and heavy brush had been chained, raked and stumps cut at ground level, this Cat D8 Tractor with heavy-duty harrow proved a most effective tool. The number of passes, one or two, on an operation like this, is up to the individual forest owner.



PLANTING: These two Caterpillar D4 Tractors equipped with V-plows and wild-land planters planted 20,000,000 seedlings on a 24,000-acre plantation. The sure-footed traction and dependable performance of these rugged Diesel Tractors contributed substantially to low-cost production on this operation.

ks
his
le.
he
el,
ed

ors
ers
re
le-
nel
ost